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1 INTRODUCTION AND CODE OF CONDUCT

Welcome to the Boston University Mechanical Engineering Department. This document presents an expanded description of the requirements for earning a PhD in Mechanical Engineering (MechE) at Boston University (BU). It also outlines the administrative and operational details involved in completing these requirements. This document is intended to serve as a reference guide for students and faculty in the Department throughout the entirety of one’s time in our program.

Our community: ME and you

You are a member of our Mechanical Engineering PhD community; you belong here. As a member of the ME PhD community, you should expect to study and learn and teach in an atmosphere of unfettered free inquiry and exposition. You should expect to be treated with dignity and respect, and to work in an environment free of bullying, harassment, and discrimination. The BU ME department policies, its officers, and its representatives, including you, will strive at all times to foster a positive culture for work and study which promotes welcome, upholds dignity of all individuals, and permits freedom of thought and expression within a framework of mutual respect. You should expect everyone in our community to adhere to these guidelines of personal and professional conduct. Everyone includes you.

2 OVERVIEW OF PHD PROGRAM TIMELINE

The variability of individual paths through the program is wide. Nevertheless, typical progress through the MechE PhD degree follows the timeline described below:

- The focus of the first year should be students completing the required lab rotations and finding a research home, which is required before the qualifying exam can be taken.
- Course requirements should be completed as early as possible, within the first year or two.
- All students complete two semesters of Graduate Student Teaching (GST) in addition to teacher training (ME 801 & ME802). Most students complete their GST requirements (ME 801 & ME 802) between the third and sixth semester from matriculation.
- The Oral Qualifying Exam is taken during the Spring or Summer of the first academic year.
- The Prospectus Defense should be presented by the end of the third year from matriculation into the program, and typically one to two years following the qualifying exam.
- PhD students must meet with their dissertation committee at least annually following the Prospectus Defense. These meetings must be documented.
- PhD students have five years to complete the dissertation after becoming a PhD candidate.
- The culmination of the PhD is the dissertation, which consists of both a written PhD Dissertation and an oral Dissertation Defense (Final Oral Exam).
3 ADMINISTRATION OF THE PHD PROGRAM

The Departmental PhD Program Committee, chaired by the Associate Chair for Graduate Research Programs, oversees most aspects of PhD program. This committee oversees admissions, petitions, program requirements, and monitors the progress of each student toward completion of degree requirements. The Department’s Associate Chair for Graduate Research Programs is also a member of the College of Engineering Graduate Committee.

Students should contact the MechE PhD Program Manager and the Associate Chair for Graduate Research Programs for assistance in matters relating to the PhD program.

4 ADMISSIONS

Students may be admitted to the PhD program with either a Bachelor’s or a Master’s degree, or their equivalent, in mechanical engineering or a closely related field. Individuals who enter the post-Bachelor’s PhD degree program are required to declare the M.S. degree upon fulfillment of the M.S. degree requirements after they have passed their Prospectus Defense.

International and domestic students applying for Fall matriculation must submit a completed application by December 15. PhD applications for the Spring semester are not accepted. Decisions for financial aid are made in conjunction with the admission applications.

Additional information of requirements and dates can be found in the College of Engineering’s Graduate Programs Office’s website: http://www.bu.edu/eng/prospective-graduate/apply/

5 OVERVIEW OF DEGREE REQUIREMENTS

5.1 Course Requirements
The student should select courses in consultation with their Academic Advisor. This consultation should involve a discussion of the match between the student’s interests and the course content, as well as the time commitments the student anticipates making to coursework, research, and teaching over the course of the semester. The student’s course selection must be approved by the student’s Academic Advisor at the start of each semester. For post-Bachelor’s students, the PhD program planning sheet should be used to guide the student’s selection of courses. A completed planning sheet signed by the Academic Advisor needs to be turned in to the PhD Program Manager upon completion of structured didactic course requirements. For this handbook, structured didactic refers to those courses that are typically 4 cr academic lecture courses; these exclude, for example, research credits, independent study credits, seminar courses, physical training, musical training, teacher training courses, etc.

5.2 Credit Requirement for Post-Bachelor’s PhD Students

Post-Bachelor’s PhD students are required to complete a minimum of 64 credits applicable to their degree. Of this total, 32 credits must be structured courses at the 500-level or higher, and must satisfy the requirements on the Post-BS PhD program planning sheet. A minimum of 16 research/dissertation credits is required. Post-Bachelor’s PhD students admitted to the program are required to declare the M.S. degree upon defending their dissertation prospectus and fulfillment of the M.S. degree requirements.

5.3 Credit Requirement for Post-Master’s PhD Students

Students are required to complete 32 credits applicable to their degree. Of those, a minimum of 8 credits of research/dissertation are required. Post-Master’s PhD students, who have completed all credit requirements, are required to register for a minimum of 2 research or dissertation credits each academic semester unless taking a specific course or on an approved Leave of Absence. Courses below the 500-level are not applicable to the post-Master’s PhD program.

No courses may be transferred from other universities to reduce the 32-credit requirement. Specific requirements relative to the selection of courses, seminars, and research or directed study will be determined in consultation with the student’s Academic Advisor and/or Research Advisor.

Post-Master’s PhD students who obtained their Engineering Master’s degree at Boston University may petition to apply credits not used for their Master’s degree to their PhD program. Only credits that are applicable to degree requirements are acceptable (i.e., 500-level and above, with grade of B or better, etc.). The student is required to fill out a petition form and have it signed by their advisor and Department’s Associate Chair for Graduate Research Programs before submitting it to the Graduate Programs Office for processing.

5.4 Auditing Courses

The College of Engineering’s policy for auditing courses can be found here.

5.5 Dissertation Research Project

The dissertation research project is a major research endeavor. Each student is responsible for finding a Research Advisor and conducting scientific studies under the mentorship of the Research Advisor. The Research Advisor provides guidance to the student, but the student is expected to contribute ideas and
to grow to work independently. Each student is responsible for completing four milestones on the path to completing the dissertation research project: the PhD Qualifying Examination, the Prospectus Defense, the Final Oral Examination, and completion of a satisfactory dissertation and its submission to the university library.

5.6 Graduate Student Teaching (GST)

Each PhD student is required to complete two semesters of training as a graduate student teacher (GST). This includes two semesters of teacher training through courses ENG ME 801 and ENG ME 802, and active, supervised teaching as a Graduate Student Teacher (GST). Typically, in the first semester of training as a GST, the PhD student will enroll in ME801. In the second semester of training as a GST, the PhD student will typically enroll in ME802.

5.7 Responsible Conduct of Research (RCR) Training

Each PhD student must complete Responsible Conduct of Research (RCR) training by the time they complete their Prospectus Defense. The guidelines for how to fulfill the RCR requirement can be found here: https://www.bu.edu/research/ethics-compliance/responsible-conduct-of-research/training-programs/rcr-for-doctoral-or-postdoctoral-researchers/

There are two steps to complete the RCR requirements. The first is to complete the RCR Training through CITI. More information on Step 1 can be found here.

The second step is to register for the RCR course (ENG EK800). The RCR course is a 1 credit, non-tuition bearing course open to all PhD students and postdoctoral scholars. This 10-week course will meet once weekly for 50-minute sessions and fulfills the new National Science Foundation requirements as well as existing National Institutes of Health requirements.

6 ACADEMIC STANDARDS AND SATISFACTORY PROGRESS

6.1 Academic Standards

The academic progress of every graduate student is reviewed at the end of each semester. Failure to make satisfactory progress and remain in Good Standing can result in Academic Probation, Suspension, for a stated time or until stated conditions are met, or Dismissal, as detailed below. Grades of C+ or lower are not applicable to satisfying the PhD degree requirements. Every student is required to adhere to Boston University's Academic Conduct Code in all aspects of their research, coursework, and teaching. This code stipulates the university's standards for academic honesty and integrity.

Good Academic Standing
Students maintain good academic standing when they: (1) earn a semester GPA of at least 3.00 (students enrolled only in Pass/Fail courses are exempt from the semester GPA standard); and (2) maintain a cumulative GPA of at least 3.00.

Academic Probation
A student is put on Academic Probation when they earn a semester or cumulative GPA below 3.00. Students on Academic Probation may have their financial aid discontinued. In the event that the semester or cumulative GPA is below a 2.00, a student may be dismissed from the program. Students are reviewed after one semester on Academic Probation. Those who earn a semester and cumulative
GPA of 3.00 or above will return to Good Standing. Those students who do not achieve Good Standing (as defined above) after the probationary semester will be subject to Academic Suspension, Dismissal, or an additional semester of Academic Probation as determined by the College on a case-by-case basis.

**Academic Suspension**
A student on Academic Probation faces Academic Suspension or Dismissal when they have not achieved Good Standing (as defined above) after the most recent semester of Academic Probation. Specifics regarding Dismissal or the duration and terms of the Academic Suspension will be determined by the college on a case-by-case basis. Dismissal results in permanent separation from the University. Appeals of Dismissal or Suspension are directed to the Associate Dean for Academic Programs.

**Reinstatement after Academic Suspension**
Students who have fulfilled their period of Academic Suspension must meet with their academic advisor and must also reestablish their standing in the college by contacting the College of Engineering Graduate Programs office.

**GPA Requirement for Graduation**
Doctoral students must complete all degree program requirements and earn a cumulative grade point average of at least 3.00 to be awarded a degree. The cumulative grade point average includes all coursework taken after matriculation and all courses completed prior to matriculation submitted in fulfillment of degree requirements.

**Dismissal of a Student from the Research Advisor’s Group**
Sometimes a student, the advisor, or both feel it is appropriate to sever the student-advisor relationship. If this action is initiated by the research advisor, then the research advisor must provide a letter to the student, copying the Associate Chair of Doctoral Programs. This letter should be provided 4 months ahead of the dismissal date (equivalent to a semester or summer). During this time, the student is encouraged to find another faculty member to work with who can fund the student. The department will advise the student of possible alternatives, but it is ultimately the responsibility of the student to find a new research home. The department may aid the student by providing summer teaching or by providing a semester of gap funding if there is another faculty member willing to supervise the student. However, there is no guarantee provided by the department to continue to fund a student without a research advisor. Decisions to provide gap funding are at the discretion of the department chair. Lack of an advisor will result in the final dismissal of the student from the PhD program.

**6.2 Satisfactory Progress**
The Department considers that a PhD student is making Satisfactory Progress towards completing the PhD program if the student meets the following conditions:

1. The student is in Good Academic Standing.
2. By the end of the student’s second semester, they have secured commitment from a faculty member to serve as the student’s research advisor. This commitment signifies that the faculty member will use a research grant to provide a Research Assistantship to the student starting at the beginning of their first Summer term (i.e. May 1 of the Spring following a Fall starting date) or, in a case where the student has an external fellowship, that the faculty member will mentor the student on a dissertation project that is consistent with the terms of the fellowship. **This commitment must be renewed in each subsequent semester for the student to be considered**
to be making Satisfactory Progress.

3. The student has passed the PhD Qualifying Exam by the end of the student’s third semester.

4. Within two years of attaining candidacy in the PhD program, they have attempted the Prospectus Defense. By the end of the student’s seventh semester, they have passed the Prospectus Defense.

The Associate Chair for Graduate Research Programs reviews the progress of each PhD student annually. Any student not making Satisfactory Progress may be subject to withdrawal from the PhD program.

7 ADVISORS

7.1 Academic Advisor

All PhD students must have an academic advisor in the department. New students will be assigned an academic advisor at registration. If one is not assigned by the time of registration or if the student wishes to change their academic advisor, the student should consult with the PhD Program Manager. As soon as an academic advisor has been assigned or changed, it is up to the student to provide that individual’s name to the Department’s PhD Program Manager.

7.2 Research Advisor

All PhD students must have a research advisor by the end of their second semester in the program. The research advisor does not need to have a faculty appointment in the department. When the research advisor is a faculty member in the department, then it is expected that the research advisor will also be the academic advisor. A major doctoral research advisor who is not a member of the department may serve under the following two conditions:

1. They are approved by the Department Graduate Committee.
2. A faculty member of the department agrees to serve as a co-major research advisor.

8 FINDING A RESEARCH HOME

Occasionally students enter the program with a pre-existing relationship and expectation to work with a specific research advisor, and that expectation is reciprocated by the advisor. Most students, however, will use their first one or two semesters in the program to define their specific interests in Mechanical Engineering and to identify the opportunities for a research advisor and Research Assistantship through the first-year research rotation program.

8.1 First-Year Research Placement Program

The objectives of the research placement program are: (1) Learn about ongoing PhD research across the ME department; (2) Identify one of the many funded projects in the department that can provide financial support for your PhD studies; (3) Settle into a research group in which both student and faculty advisor believe the student will thrive. This is accomplished through two main components which help to address the three goals above: a seminar course (ME 790), and a placement tracking course (ME
Note that ultimately it is the student’s responsibility to identify a dissertation advisor and funded project. The research rotation program is meant to facilitate information sharing.

**ME790 Graduate seminar in Mechanical Engineering** (1 credit). All first year PhD students are expected to enroll in ME 790 in the fall semester; the class is graded on a P/F basis. This seminar course consists of a sequence of short lectures to allow faculty to provide an overview of department research to new students. These talks will give opportunities for students to learn about different research methods and topics within the ME department, and to interact with ME faculty in a comfortable setting.

**ME791 Mechanical Engineering PhD Research Placement Program** (1 credit Fall, 2 credits Spring). All first year PhD students are expected to enroll in ME 791. All first year PhD students (both post-Bachelor’s and post-Master’s) are expected to perform three placements of six to seven weeks each. The first placement will be at the end of the fall semester, the second and third will be in the spring semester. If you have already identified your intended PhD advisor, you may expect to do all your placements with that advisor. Students enrolled in ME 791 are expected to: (a) Identify faculty members/labs that will host their placements; (b) Submit a written description of their placement experience to the Graduate Program Director.

### 9 PHD QUALIFYING EXAMINATION

The purpose of the PhD qualifying exam is to ensure that students have the capability of synthesizing information from courses and literature to form a deep understanding of the research field. The exam will evaluate students’ technical communication skills in both written and oral format. Students are required to review a research paper in a specific research area, submit a written report, and give an oral presentation. All PhD students will take the qualifying examination during the Spring or Summer semester of the first year. Note that a pre-requisite for taking the exam is that the student has identified a research advisor.

[Qualifying Exam Document](#)

[Qualifying Exam Form](#)

### 10 PHD CANDIDACY

A student is admitted to PhD candidacy upon successful completion of the Qualifying Examination. At that time the candidate will receive formal notification of PhD candidacy from the Department. Students should take the initiative by checking with the department if they do not receive a candidacy letter within a reasonable time after passing the qualifying exam.

The maximum period allowed between matriculation and acceptance to PhD candidacy is four semesters.

Once entered, PhD candidacy will expire on its fifth anniversary. The student may need to petition the department for an extension of time. The petition should include a plan or timeline for completion, an explanation of why the dissertation has not been completed on time, and confirmation from the research advisor and dissertation committee that the proposed plan is appropriate.

### 11 PROSPECTUS
By the end of the third year in the program, and no later than two years after attaining candidacy, it is required that a PhD candidate will present an oral defense of their Dissertation Prospectus to the Prospectus committee. The purpose of the Prospectus defense is to determine whether the topic to be investigated is an acceptable research problem for the degree and whether the student is prepared to conduct the proposed research. The student is expected to have engaged in a substantive research effort under the mentorship of their Research Advisor before scheduling the Prospectus Defense so that the student can present a cogent description of the proposed dissertation project. However, the Prospectus defense should be completed before the more extensive phase of the actual research is undertaken. A complete package of information and necessary forms can be obtained from the Department PhD Program Manager. In no instance will a student be allowed to present a Prospectus Defense until they have attained candidacy. PhD students should check with the Department PhD Program Manager for any additional rules or restrictions.

**MechE PhD Prospectus Defense Form**

### 11.1 Prospectus Defense Committee

The Prospectus Defense Committee will normally consist of a minimum of three College of Engineering tenured or tenure-track faculty and must include at least two faculty members from the Mechanical Engineering Department. Membership of the committee generally constitutes the nucleus of the dissertation committee and Final Oral Examination Committee. The composition of the Prospectus Defense Committee is to be reported to the Department’s Associate Chair for Graduate Research Programs by the student prior to scheduling the Prospectus Defense. The Chair of the Committee is the student’s Research Advisor. A major doctoral Research Advisor who is not a member of the Department may serve under the following two conditions:

1. They are approved by the Department Graduate Committee.
2. A faculty member of the Department accepts to serve as co-major Research Advisor.

Occasionally scholars from outside the University serve on dissertation committees. When a scholar is from outside the University, a [Special Service Appointment (SSA) form](#) must be completed. A copy of the person’s vitae and the completed form, with the approval of the Department’s Associate Chair for Graduate Research Programs is submitted to the Associate Dean for Research and Graduate Programs. The student will be notified in writing of the approval or disapproval of the person requesting special appointment.

### 11.2 Dissertation Prospectus

The student must provide a copy of the Dissertation Prospectus to all members of the Prospectus Defense Committee before scheduling the Prospectus Defense. The Prospectus should include:

1. Title page
2. A project summary of no more than 350 words
3. A statement of the problem to be investigated
4. Background information from prior work in the field
5. Research design and methods
6. Preliminary results (if available)
7. Anticipated timetable for completion
8. Bibliography
9. Curriculum vitae

More details on these sections are provided on the accompanying pages of the PhD Prospectus Defense form. The preferred format is similar to that of proposals submitted to a Federal Agency. There is a 25-page (single-space) limit on the scientific portion of the proposal. This includes tables and figures but does not include the bibliography. Please refer to the “Research Guide For the Writers of Theses and Dissertations.”

The title, abstract, date, time, location, and committee names of the Oral Proposal Defense must be submitted to the Department’s PhD Program Manager, four weeks before the Prospectus Defense. It is the student’s responsibility to obtain the necessary committee members’ signatures and an agreed upon date and time for the presentation. The student is responsible for reserving a room for the presentation. Students can ask the PhD Program Manager for room reservation assistance. Failure to meet this deadline can result in postponement of the defense. The above information should be filled out on the Prospectus Defense Form and submitted to the PhD Program Manager. After approval, the PhD Program Manager will return the form to the student who will then use the same form to collect Committee Members’ signatures.

When collecting Committee signatures, the student must provide the Committee Members with the written prospectus document. After reading the written prospectus and agreeing that the student is ready, the Prospectus Committee members will indicate their approval on the “PhD Dissertation Prospectus Defense” form. Student must return the signed Prospectus Form and their written prospectus document to the PhD Program Manager two weeks before the Prospectus Defense. The form, abstract, and written prospectus will then be submitted to the Department’s Associate Chair for Graduate Research Programs for approval. The Department’s Associate Chair for Graduate Research Programs must indicate approval on the form and send the form to the PhD Program Manager. The PhD Program Manager will forward the form to the Chair of the Prospectus Committee. It is the Chair’s (i.e. advisor’s) responsibility to bring the original form containing the Committee Members’ signatures to the oral presentation.

11.3 Oral Presentation of the Prospectus

A public oral presentation of the Prospectus must be made in which the student describes the proposed research and demonstrates their preparation to complete the proposed research and write a dissertation. The schedule of the oral presentation is distributed by the department once the student is advised by the Committee that the proposal is accepted for the oral defense.

It is the department’s responsibility to provide adequate publicity for the student’s Prospectus Defense. Defenses are open to the public. The faculty Research Advisor should chair the Defense and begin with an introduction of the PhD student. The introduction should include a brief description of the student’s academic background. The student should restrict the length of the presentation to approximately three quarters of an hour. During this period, questions may be asked by Committee Members and the
audience. The Chair should guard against digressions and inappropriate questioning during the presentation. Following the public question period, the audience members are dismissed for private questioning of the student by the committee. Following this further questioning, the student is dismissed and the Committee remains to complete its assessment of the Prospectus document and the presentation.

11.4 Assessment of the Prospectus Defense

The Dissertation Prospectus Committee is charged with assessing the appropriateness of the problem and the student's preparation based on the written dissertation proposal and the oral presentation. The Committee must decide if the student passes, passes with conditions, or fails. The Committee may determine that the student needs additional courses and/or suggest revisions to the dissertation topic goals and approaches to the solution. If there are required revisions to the written proposal, or if additional course work is required, such conditions must be appropriately documented and attached to the PhD Prospectus Defense Form.

11.5 Reporting of the Prospectus Defense outcome

The student’s advisor as chair of the exam committee will complete the "Prospectus Defense Results" section on the "PhD Dissertation Prospectus Defense" form. If the student is required to meet certain conditions, those conditions should be listed on a separate sheet and attached to the form. Those conditions should also contain time frames for completion. The Chair then signs the form and forwards it to the Department’s PhD Program Manager for signature. The department will confirm the results of the Prospectus Defense to the candidate in writing. If the results indicate that more work must be done and/or that specific conditions must be met, these conditions will be indicated in the letter to the student.

11.6 Registration After Passing Prospectus Defense

Post-prospectus PhD candidates will enroll for research credits of dissertation (ME991). Once all credit requirements have been satisfied, post- prospectus PhD candidates must enroll for a minimum of two dissertation credits (ME991) per semester until completion of the degree. Registration each semester allows the student to use all academic facilities of the University and entitles PhD candidates to audit one course per semester, excluding summer term, at no charge provided they have met the credit requirements. Failure to register for two consecutive academic semesters without having been granted authorized Leave of Absence will result in termination of degree status.

12 POST-PROSPECTUS COMMITTEE MEETINGS

Following completion of the Prospectus Defense, each PhD student is required to meet with their Prospectus Committee at least annually until the dissertation is complete. Over the time between the Prospectus Defense and the Final Oral Examination, it is expected that the Dissertation Prospectus Committee will transition into the Final Oral Examination Committee. At each of these annual meetings, the PhD student is expected to present an update on the research progress that they have performed towards the dissertation since the last committee meeting. The Committee is expected to engage the student in discussions about the research in ways that will guide the student’s progress and preparation for the dissertation.
13 FINAL ORAL EXAMINATION AND DISSERTATION

Students shall present themselves for a Final Oral Examination in which they must defend their dissertation as a worthy contribution to knowledge in their field and demonstrate mastery of their field of specialization as related to the dissertation.

PhD Final Oral Examination Form

Before defending their dissertation, students must apply to graduate: https://www.bu.edu/eng/academics/resources/graduate-student-resources/apply-to-graduate/

Students are expected to read and follow the latest edition of the Guide for Writers of Theses & Dissertations. Although students will have an opportunity to make final revisions to the dissertation and abstract after their Final Oral Examination, they should not regard their Final Oral Examination version as a “rough draft.” For example, this version of the abstract is the version circulated to the College of Engineering, members of the examining committee and the Office of the Provost and Executive Vice President. A final version of the abstract is submitted with the definitive version of the dissertation for publication in Dissertation Abstracts International.

Dissertations are public documents. The student’s final work is a significant contribution to their field of study. In some cases, an embargo may be necessary due to sensitive material in the document. It is possible to request an embargo on a thesis or dissertation restricting its public availability. Students should follow the directions on how to request an embargo in the above-mentioned guide.

To be allowed to defend a completed PhD dissertation a student must (a) be a PhD candidate, or (b) have not passed the Prospectus defense at least six months prior to the dissertation defense. These are the minimum requirements of the College of Engineering. PhD students should check with the Department’s PhD Program Manager for any additional rules or restrictions.

13.1 Final Oral Examination Committee

The nucleus of the Final Oral Examination Committee is normally comprised of the Prospectus Defense Committee. It consists of the reading committee and the exam chair. The department will appoint an appropriate exam chair who may be reasonably regarded to be impartial to the outcome of the exam. The chair may not be a member of the reading committee, nor be otherwise involved in the dissertation research in any way. It is the candidate's responsibility, in conjunction with their Research Advisor, to identify members of the dissertation reading committee. The minimum Final Oral Exam Committee size is five: the major Research Advisor (1st reader), three additional readers, and an examination Chair. A minimum of two of the members of the reading committee must be (tenured or tenure-track) faculty from the Department. The Department assigns the Chair for the committee. A reader cannot also act as the Chair for the exam committee. The Chair does not have to be a member of the Department, but must be a tenured member of the College of Engineering. A major Research Advisor who is not a member of the Department may serve under the following two conditions:

1. They are approved by the department’s Graduate Committee.
2. A faculty member of the department accepts to serve as a co-major research advisor.
Committee members from outside the University must be approved by the College using the Special Service Appointment form. The completed form and a copy of the person's vitae, with the approval of the Department’s Associate Chair for Graduate Research Programs is submitted to the Senior Associate Dean for Academic Programs. The student will be notified in writing of the approval or disapproval of the person requesting special appointment. If this process was followed during the Prospectus Defense, the information should already be in the student’s file and will not need to be repeated. However, if this is a new member or for some reason the process was not followed at the time of the Prospectus Defense, it will need to be done prior to scheduling a date for the final defense. This is a College of Engineering rule that serves as a minimum requirement for the Department.

13.2 PhD Dissertation Defense Abstract

The candidate submits the abstract, maximum of 350 words, to their research advisor for approval. Once the abstract has been approved by the Research Advisor and a tentative defense date determined, the student is responsible for emailing the final copy to the Department Academic Program Manager. This form must be emailed to the PhD Program Manager at least four weeks prior to the proposed date of the dissertation defense for announcement and committee chair recruitment purposes.

13.3 Final Oral Examination

The Final Oral Examination is a public presentation of the candidate's dissertation. The presentation should clearly define the problem, describe the method(s) used to solve the problem, report results and establish significance of the results. The candidate should contact the Department PhD Program Manager for current forms, guidelines, and deadlines.

The purpose of the Final Oral Examination is to ensure that the dissertation constitutes a worthy contribution to knowledge in the candidate's field and that the candidate has attained mastery in their field of research specialization.

13.4 Arranging of the Final Oral Examination

The candidate must provide a copy of the Dissertation to all members of the Final Oral Examination Committee prior to requesting that their examination be scheduled. The student can obtain a copy of "Research Guide for the Writers of Theses and Dissertations", from the Department’s PhD Program Manager. It is the candidate's responsibility to ensure that all formatting and reproduction requirements are met, including their Abstract and Dissertation. The student is responsible for obtaining a preferred date and time for the presentation by having the agreement of all their Committee members.

It is the candidate's responsibility to obtain signatures of all Committee members on the "PhD Final Oral Examination" form indicating they have read the dissertation and agree the individual is prepared to proceed. The candidate then submits the form to the Department’s PhD Program Manager. This must be done, at a minimum, two weeks prior to the defense. Candidates must adhere to the current deadlines for completing the Final Oral Examination and submitting their Dissertation.

It is the student's responsibility for scheduling a date, location and time with all the Dissertation Defense Committee members for the examination. Conference room reservations can be requested via the ME
The name of the Chair is provided to the candidate by the department. The student is also responsible for providing the Chair with a copy of the dissertation. The Chair is not required to sign the dissertation, but may choose to read it.

It is the department’s responsibility to provide adequate publicity for the student’s Final Oral Defense, typically two weeks, but at minimum one week, prior to the Dissertation Defense.

The Department’s PhD Program Manager sends the signed original “PhD Final Oral Examination” form to the Chair. The Chair brings the original form to the presentation.

13.5 Conduct of the Final Oral Examination

No Final Oral Examination may begin unless all College approved committee members, as listed on the “Final Oral Examination” form are present. It is the Chair’s responsibility to enforce this requirement, who may exercise discretion if immediate exigency requires it (for example, by finding a substitute for a single missing member.) The faculty Research Advisor or Committee Chair should introduce the candidate and include a brief academic background description.

The candidate should restrict the length of the presentation to approximately 50-60 minutes. The candidate's conduct should be of a professional manner, and any handouts, slides etc., should be neatly prepared. During this period, questions of clarification may be asked by the Committee members or the audience.

The Chair should guard against digression and inappropriate questioning during the presentation. It is the Chair's responsibility to ensure the student's presentation is given the respect it deserves by not allowing Committee or audience members to have side discussions.

Following a public question and answer period, the audience should be dismissed by the Chair. The Committee may wish to ask additional questions of the candidate at this time. Following this additional questioning by the Committee, the candidate should be excused so the Committee may complete its assessment of the Defense and Dissertation.

13.6 Assessing of the Final Oral Examination

The Final Oral Examination Committee is charged with assessing the completeness of the research, contribution to knowledge, and the candidate's mastery of their research area, based on the written dissertation and the oral presentation. Vote may be ballot or voice. A unanimous vote is required for a candidate to pass. It is the Chair's responsibility to call the candidate back after the Committee has reached a decision. The Chair will advise the student of the Committee's decision. At this time the candidate should be advised of any changes that must be made to the final title, abstract, or dissertation document.

13.7 Reporting the Results of the Final Oral Examination

The “PhD Final Oral Exam Form” must be completed at the examination, with specific indication of whether the title abstract and dissertation are acceptable as submitted. It is the Chair's responsibility to
see that this form is completed and signed. Any required revisions are to be noted on the form and a separate piece of paper indicating what is to be done is then attached to the form. Time frames should be included in the listing. Committee members should sign off on the "PhD Final Oral Examination" form at this time, **but will refrain from signing the dissertation Approval page until all conditions have been met.**

Any revisions must be completed as soon as possible and in accordance with the committee’s requirements. If all requirements are acceptable, the Approval page of the dissertation is to be signed by all Committee members, except the Chair.

The Chair delivers the signed "PhD Final Oral Examination" form and any attachments to the Department’s PhD Program Manager. It is the responsibility of the Department’s PhD Program Manager to ensure that all necessary information is recorded with the University.

### 13.8 Dissertation Approval

Final approval of the title, abstract and dissertation, if not given at the time of the examination, will be indicated by the signatures of all Committee members, except the Chairperson, on the Dissertation Approval page.

It is the student's responsibility to deliver copies of the Dissertation to the major Research Advisor and to the Department to satisfy final department requirements. At this point the student will complete the "Boston University Mugar Memorial Library Thesis and Dissertation Approval" Form, and the Department’s Associate Chair for Graduate Research Programs will sign approval.

It is the student's responsibility to visit the Library to have the Approval page verified BEFORE submitting it to the committee members for signatures. The Department’s PhD Program Manager will retain one copy of the Approval page and Title page for recording purposes. Doctoral candidates are expected to submit the significant results of their research to recognized journals for publication

### 13.9 Library Submission

It is the Department’s PhD Program Manager's responsibility to ensure that the Approval page for the dissertation has been signed by all the Committee Members (except the Chair). The student's record and account balances should be checked at this time.

After submitting the Approval page and title page to the PhD Program Manager, the student must submit their thesis electronically to Mugar Library. The information on how to do this may be found here: [http://www.bu.edu/library/guide/theses/](http://www.bu.edu/library/guide/theses/). Please make sure to have your approval page (signature page) approved by the library before you have your committee members sign it as it must conform to their approved template.

It is the responsibility of the Graduate Programs Office to ensure that the University records reflect that the candidate has completed all necessary requirements for their PhD degree and that the student's name appears on the official graduation list

### 14 GRADUATION
The student must inform the Graduate Programs Office (GPO) of their intent to graduate. The Department in conjunction with the Graduate Programs Office will advise the student of the graduation proceedings. It is the student’s responsibility to inform the Graduate Programs Office of their current mailing address and email address. See the GPO’s website on how to apply to graduate: https://www.bu.edu/eng/current-students/grad/current-students-2/graduation/

15 FUNDING

All PhD students must be funded through some combination of Research Assistantship (RA), Departmental Distinguished Fellowship, Dean’s Fellowship, Department Fellowship, or external fellowship for the duration of their PhD studies. All incoming PhD students on Research Assistantships or Departmental Distinguished Fellowships will receive the same monthly stipend at the base rate. After fully passing the Qualifying Exam, PhD candidates will receive a stipend increase of 10% above the current base rate at the start of the following academic year.

15.1 Research Assistantships (RAs)

A PhD student receives an RA to engage in research under the supervision of their Research Advisor. RAs are expected to engage in research full-time, with time allowed to fulfill other degree requirements (e.g. take courses or participate in teaching) during the academic year. Students funded on an RA may receive up to 16 credits/semester of tuition coverage for graduate courses applicable toward their degree.

15.2 Departmental Fellowships and Dean’s Fellowships

The Department and College have a limited number of Departmental Distinguished Fellowships and Dean’s Fellowships to support first-year PhD students. Students receiving one of these fellowships must remain in good academic standing. While receiving this fellowship, students are required to engage in research under the supervision of a faculty member and may receive up to 16 credits/semester of tuition coverage for graduate courses applicable toward their degree.

15.3 External Fellowships

The Department encourages PhD students to seek external fellowships from reputable sources that will enhance their careers and provide resources toward their tuition and stipends. In the event that an external award is less than the stipend rate offered by an RA or Departmental Distinguished Fellowship, the College will supplement to make up the difference. The Department will also encourage our students to seek external fellowships by providing recipients of these fellowships with additional resources for academic enrichment (e.g. books, supplies, travel to conferences and workshops) while they are graduate students at BU.

16 TUITION

Graduate Tuition and Fees for full-time and part-time students are listed on the Graduate Programs Office’s webpage, found here.

Requirement of Medical Insurance

Students enrolled for 3/4 time or more and all international students must enroll in the University’s medical insurance plan unless proof of other comparable health insurance is provided. If a student has
other coverage and fails to submit a Waiver to Student Accounting Services by the deadline, that student is still obligated to pay the medical insurance charge. The University cannot accept medical insurance waivers based on coverage by an insurance company outside the United States. For additional information visit https://www.bu.edu/studentaccountingservices/resources/medical-insurance/.

17 ADMINISTRATIVE REQUIREMENTS

17.1 Registration

All students are required to register each academic semester (Fall, Spring, and Summer) unless on an approved Leave of Absence. A continuing student is required to register prior to the registration deadline, or a late fee will be assessed. If a student needs to be registered for either of the summer terms, it is their responsibility to do so. Please see Boston University (BU)’s registration deadlines and information: https://www.bu.edu/reg/calendars/semester/.

PhD students registering for research credits should register for ME900 (research) if they have not yet passed their Prospectus Defense and ME991 (Dissertation Research) if they have passed their Prospectus Defense. Both ME900 and ME991 are graded Pass/Fail.

17.2 Full-Time Status

To have status as a full-time student at Boston University, a student must be either enrolled in at least 12 credits in the current semester OR be certified as full-time by the PhD Program Manager by the registration deadline. A student may attain full-time status when enrolled in fewer than 12 credits if the student is substantively engaged in research (i.e. funded on an RA, Departmental Distinguished Fellowship, or External Fellowship) and/or teaching training. Full-time status is examined for every student every semester; hence, in any semester in which the student seeks full-time status, they must meet the 12-credit minimum or be certified as full-time by the PhD Program Manager. All first year students and all international students supported on non-service stipends must enroll in 12 credits to meet the full-time requirement.

A typical course load for a first year post-Bachelors PhD student funded on a Distinguished Department Fellowship or Dean’s Fellowship is three courses per semester. Most PhD students will be engaged as Graduate Student Teachers for two semesters of their second or third year in the program. While there is no formal requirement for the number of courses completed prior to taking the PhD Qualifying Exam, post-BS students typically take 3 per semester, and thus have completed the majority of their required courses prior to taking the Qualifying Exam. Taking three courses per semester in the first year provides students the preparation and time to succeed in the major requirements of second year PhD students (research, Qualifying Exam, teaching training) and avoids delaying the completion of all of their structured course requirements.

A typical credit load for a student funded on an RA is eight credits per semester until the student completes all credit requirements for the PhD degree. Some students may, in consultation with their Research Advisor, choose to enroll in more than eight credits because they want to take more than two courses in a given semester. Normally, no more than four (4-credit) courses should be taken concurrently.
Following completion of all credit requirements for the PhD degree, the student enrolls in two research credits or dissertation credits per semester until they successfully complete the Final Oral Examination and submits their dissertation to the library.

The only exception to the credit requirements stated above is an authorized Leave of Absence. *International students must have full-time status to meet visa requirements.*

**17.3 Residency Requirement**

Each student must satisfy the minimum residency requirement of two consecutive regular semesters of full-time graduate study at Boston University. Full-time study in this context is a full-time commitment to the completion of degree requirements as determined by the Associate Dean for Research and Graduate Programs. To graduate, students must be registered as full- or part-time students in the semester in which they complete degree requirements and in the preceding semester.

**17.4 Leave of Absence or Withdrawal**

Normally, students must register for each academic semester (excluding summer term) until the completion of all degree requirements. If a student requires a leave of absence, it is the student’s responsibility to submit a completed Withdrawal or Leave of Absence Form to the Graduate Programs Office. Leave of Absence and Withdrawal policy is described here: [https://www.bu.edu/academics/eng/policies/graduate-policies/withdrawal-leave-of-absence-and-reinstatement/](https://www.bu.edu/academics/eng/policies/graduate-policies/withdrawal-leave-of-absence-and-reinstatement/)

**18 POLICIES AND RESOURCES**

*Boston University Diversity Statement*
*Vacation Policy for PhD students*
*Sick Leave Policy for PhD students*
*Childbirth and Adoption Accommodation for PhD Students*
*Sexual Misconduct / Title IX Policy*
*Withdrawal, Leave of Absence, and Reinstatement Policy*
*Auditing Courses Policy*

*Complaint Procedures in Cases of Alleged Unlawful Discrimination or Harassment*
*Disability Accommodation*
*Equal Opportunity/Affirmative Action Policy*
*Student Grievance Procedure in Cases of Alleged Disability Discrimination*

If you have questions about the policies above, please contact:
COE Director of Graduate Programs Office at enggrad@bu.edu or 617-353-9763.

**Laboratory Injuries – Coverage for PhD Students**

It is important to seek treatment promptly for any laboratory injury or exposure. If the injury or exposure does not require immediate transport for emergency care, PhD students should contact the University’s Research Occupational Health Program at 617-414-ROHP (7647), or report to 72 E. Concord St., Evans 825, which is staffed by specially trained nurse practitioners. ROHP provides
medical attention and coordinates aftercare at ROHP for laboratory injuries and exposures without any cost to PhD students.

If you have questions about costs related to laboratory injuries and exposures, please contact ROHP by phone (617-358-7647) or email (rohp@bu.edu) ROHP. Complete information and procedures for reporting can be found here.

19 DIRECTORY

Department of Mechanical Engineering

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College of Engineering (Graduate Programs Office, Dean’s Office)

<table>
<thead>
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<th>Name</th>
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<tbody>
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<td>Dean (ad interim) College of Engineering</td>
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