Program goals

The ECE department aims to educate PhD candidates to achieve a strong foundation in their research area by successfully completing coursework and the qualifying examination. The PhD candidate is expected to make an original and substantive contribution to their discipline through their research. The student is expected to become known in their field by communicating their research results via conference presentations and publications and reviewed journal articles, and the completion and defense of their PhD thesis. The goal of the PhD program is to provide the PhD candidate with the tools to become a knowledge creator and leader in their future careers in academia, industry, non-profit organizations and government.
Content

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>PhD Programs in CE and EE (Post-BS and Post-MS PhD)</td>
<td>3</td>
</tr>
<tr>
<td>Summary of PhD Timeline and Milestones</td>
<td>4</td>
</tr>
<tr>
<td>Academic Conduct Code</td>
<td>5</td>
</tr>
<tr>
<td>College of Engineering Graduate Student Academic Standards Policy</td>
<td>5</td>
</tr>
<tr>
<td>Satisfactory Academic Progress</td>
<td>5</td>
</tr>
<tr>
<td>PhD Student Funding</td>
<td>7</td>
</tr>
<tr>
<td>Financial Information</td>
<td>9</td>
</tr>
<tr>
<td>Registration Requirements</td>
<td>12</td>
</tr>
<tr>
<td>Residency Requirement</td>
<td>12</td>
</tr>
<tr>
<td>Course Work Requirements</td>
<td>13</td>
</tr>
<tr>
<td>Internships in Electrical and Computer Engineering</td>
<td>14</td>
</tr>
<tr>
<td>ECE’s Qualifying Examination – TPC and RPC</td>
<td>16</td>
</tr>
<tr>
<td>ECE PhD Candidacy</td>
<td>17</td>
</tr>
<tr>
<td>Responsible Conduct of Research (RCR)</td>
<td>18</td>
</tr>
<tr>
<td>Teaching Practicum EC801 and EC802</td>
<td>18</td>
</tr>
<tr>
<td>ECE Prospectus Defense</td>
<td>19</td>
</tr>
<tr>
<td>Annual Progress Reports</td>
<td>22</td>
</tr>
<tr>
<td>ECE Dissertation Defense</td>
<td>22</td>
</tr>
<tr>
<td>Departmental Student Awards</td>
<td>26</td>
</tr>
<tr>
<td>Resources</td>
<td>27</td>
</tr>
<tr>
<td>Important dates</td>
<td>28</td>
</tr>
</tbody>
</table>
PhD Degree Programs in Electrical and Computer Engineering

There are two PhD programs offered in ECE: a post-BS PhD program and a Post-MS PhD program. A student enrolls in either the Electrical Engineering or Computer Engineering degree for either program outlined above.

The post-BS PhD program is a 64-credit program of which 32 credits must satisfy MS EE or MS CE program requirements. All students must apply for graduation and complete the required tasks in order to receive the Master’s degree. The 4-credit MS degree practicum requirement can be satisfied with 4 credits of EC900 research work, converted from a P/F/J grade to a letter grade for the semester in which the student successfully passes the prospectus defense. The student may take graduate-level technical courses applicable to their research outside of the department, e.g., ME, MSE, BME, CS or PY graduate courses in consultation with their research advisor. The post-BS PhD student needs a minimum of 16-research credits (EC900, EC991) as part of the 64-credit requirement.

The Post-MS PhD Student is required to complete 32-credits applicable to their degree. Of those 32 credits, 8 structured credits come from ECE graduate-level courses (EC500- or EC700-level) in compliance with TPC requirements and are expected to support the intended research area. A minimum of 8 credits of research or dissertation credits (EC900, EC991) is required. A student cannot transfer courses in from another university to reduce the 32-credit requirement.

A Post-MS PhD student, who obtained a Master’s degree in Engineering at Boston University, may petition the Registrar to release up to 8 credits to their PhD program if the course credit was not used towards the Master’s degree. Only credits that are applicable to the PhD degree requirements are acceptable (e.g. EC500 and EC700-level with a 3.0 GPA or better in order to satisfy TPC requirements). The student must submit a Graduate Petition Form to the Academic Programs Manager for processing.

Once PhD students have completed all credit requirements they must register for a minimum of 2 research or dissertation credits (EC900 or EC991) 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 PhD program. Only grades of P, F, or J are assigned to research or dissertation credits.
Summary of PhD Timeline and Milestones

Details of the PhD milestones and requirements are treated in more detail later in the handbook. Additional information is also located in the overview of Boston University Doctoral Programs.

First year: Matriculation- The PhD program starts each fall at the beginning of the academic year. Mandatory Orientation takes place before the start of classes.

First year: Coursework – The majority of coursework should be completed during the student’s first year. All first-year PhD students participate in the ECE Seminar courses EC890 and EC891, which will prepare them for a successful launch into the department.

First year: Research home - The most important task for first-year PhD students is to find a research home. By the end of the second semester, students are expected to establish a working relationship with a faculty research advisor, who will provide funding for the remainder of their PhD studies.

First year: Qualifier exam - The student must pass their Research Preparation Criteria (RPC) exam by the end of the first academic year. The RPC is an oral examination with a written component. Regular RPC exams take place at the end of the spring semester of the first year. Students actively engaged in research may opt for the Early RPC exam in March of their second semester. Any student who fails or conditionally passes on their first attempt will be given can retake the exam later that same summer.

First or Second Year: Candidacy A PhD Student is eligible to apply for candidacy once they have successfully passed both the RPC exam and have completed the TPC requirements. Students must Apply for PhD Candidacy in order to receive the stipend increase, which will be effective the next semester after the milestone is reached.

Second or Third Year: Teaching Practicum All ECE PhD students are required to teach for two semesters. Typically, the first teaching assignment (EC801) is during the second year and the second assignment (EC802) is during the third year. During the semester in which the student is enrolled in EC801 or EC802, he/she may only register for 8 credits (EC801 or EC802 plus 4 credits of EC900). Students may take a structured course while teaching only if they receive permission from their research advisor.

Responsible Conduct of Research (RCR): All students are required to enroll in and complete RCR training before prospectus defense.

Prospectus: Within two years of achieving PhD candidacy, the student is expected to present an oral dissertation proposal to the prospective dissertation committee and obtain approval for the written dissertation prospectus. The committee evaluates the potential of the proposed research and the student’s academic preparation to engage in dissertation research. Upon approval of the committee members and the departmental associate chair, the student submits the PhD Prospectus Defense Form to the ECE Department.

Dissertation: A PhD candidate is expected to prepare and carry out an independent and original research project in partial fulfillment of the dissertation requirement. The dissertation committee must consist of College of Engineering (tenured or tenure-earning) faculty. Occasionally scholars from outside the University serve on dissertation committees.
Final Oral Examination – A PhD student must defend their dissertation no more than 5 years after achieving candidacy. Students shall present themselves for a final oral examination in which they must defend their dissertation as a worthy contribution to knowledge in their fields and demonstrate mastery of their field of specialization as related to the dissertation. The Examining Committee is composed of at least five members of which two must be (ECE tenured or tenure-earning) faculty. The department will appoint the defense chair.

Time Limit
Both the Post-BS and Post-MS programs must be completed within five years of acceptance into PhD candidacy. Once entered, PhD candidacy will expire on the fifth anniversary and after such time will be renewed only if the student requalifies for candidacy as determined by the department and the Graduate Committee. PhD program deadlines can be found on the Graduate Program Deadlines page.

Academic Conduct Code
Boston University’s Academic Conduct Code is designed to assist in the development of a supportive and productive learning environment. It is both a description of the University’s ethical expectations of a student as well as a guarantee of the student’s rights and responsibilities as a member of a learning community. The Code provides clarity related to policy and procedure regarding academic conduct.

Any egregious violation of academic or research ethics may result in immediate dismissal from the program at any stage with no opportunity for re-admission.

Satisfactory Academic Progress
The College of Engineering (CoE) is committed to providing five full years of financial support to PhD students who maintain Satisfactory Academic Progress. This financial support will be in the form of a Teaching Fellowship, Research Assistantship, or Graduate Fellowship. Funding beyond five years is generally provided (but not guaranteed) to students who are working productively toward the PhD degree.

Good standing: Academics
The College of Engineering Graduate Student Academic Standards Policy reviews every graduate student at the end of each semester. The student must pass the PhD qualifying exam within the allotted period, and complete the required coursework with a GPA of 3.0 or better. Thereafter, they must complete the academic milestones in a timely fashion, and make sufficient academic progress as determined by their research advisor and prospectus committee.

Boston University’s Academic Conduct Code is designed to assist in the development of a supportive and productive learning environment. It is both a description of the University’s ethical expectations of a student as well as a guarantee of the student’s rights and responsibilities as a member of a learning community. The Code provides clarity related to policy and procedure regarding academic conduct. Any egregious violation of academic or research ethics may result in immediate dismissal from the program at any stage with no opportunity for re-admission.

Good standing: Research
The student is expected to find a research home and funding by the summer of their first academic year
and is **required to find them no later than 12 months after beginning the program**. Once a funded research home has been secured, the department guarantees continued funding through the 5th year if the student is making satisfactory progress (as defined throughout this section).

PhD students are reviewed annually starting with their second year in the ECE department. In January, before the spring semester starts students complete and submit an ECE Annual Research Progress form detailing their progress during the past year and set goals with the faculty advisor for the upcoming year to meet Satisfactory Academic Progress. Each student will be evaluated on their research progress and will receive a grade for research. Students who receive an unsatisfactory grade will meet with their advisor and the Associate Chair of PhD programs in order to receive feedback and set goals for the next year.

**Inability to find a research advisor**
When a PhD student is unable to find a faculty research advisor willing to mentor and fund the student by the end of the first academic year; it is considered not making satisfactory progress toward the PhD degree. If a student is able to identify a faculty member willing to serve as a research advisor, but neither the research advisor nor the student is able to secure extramural funding for the second year, the student can petition and request one additional year of funding from departmental resources. Such a request will need to convey to the chair that the student has found a research advisor willing to supervise the student and that the advisor and/or student have a concrete plan to secure extramural funding sources following the additional year. Decisions to support this request are at the discretion of the department chair. If no such funding has emerged after the second year, the student will be deemed as not making satisfactory academic progress and may not be permitted to complete their PhD studies.

**Dismissal of a student from the research advisor’s group**
In the event a research advisorship proves unsuccessful, 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 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 support a student without research support. Decisions to support this request are at the discretion of the department chair. Lack of support will result in the final dismissal of the student from the PhD program.

**A student leaving a research group**
It is useful to figure out the reasons why a student is contemplating changing their advisor and discuss options to rectify the situation. Therefore, students are encouraged to discuss the situation with their peers, advisor and graduate chair. If the student decides to leave the group, the student should give ample notice to the current research advisor to make a smooth transition as possible. For example, the student should facilitate the transfer of knowledge that the student acquired in the group, e.g., by providing training for another student and leaving ample documentation. It is suggested that the student meets with the new advisor and their former advisor to discuss the transition schedule and duties. A student who wishes to leave an advisor and join a different group should be aware of the need to have continuous research funding.
PhD Student Funding

An incoming PhD student is typically funded by the college and department through Distinguished ECE Fellowships or a Dean’s Fellowship. By the end of the first academic year, the student is expected to work with a research advisor who will take over funding the student via a research assistantship. The student is guaranteed 5 years of funding, given satisfactory progress. If the student’s research advisor cannot provide funding for a short period, the student will receive gap funding through the department.

PhD student funding has three levels that increase with progression through the program.

1. Pre-candidacy  Base pay
2. Pre-prospectus  Base pay +5%
3. Post-prospectus  Base pay +10%

Distinguished ECE Fellowship
The Distinguished ECE Fellowship is awarded to most PhD students for their first academic year. It fully covers tuition, BU’s basic individual health insurance, the student services fee, and a monthly stipend at the pre-candidacy level. It is not renewable for the years to follow. For the remainder of the PhD program, the student is typically funded on a Research Assistantship (RA) by their research advisor.

Dean’s Fellowship
The Dean’s Fellowship is awarded to a PhD student of exceptional academic promise for the period of their first academic year. It covers their full tuition, BU’s basic individual health insurance, student services fee, and a monthly stipend at pre-candidacy level. It is not renewable for the academic years to follow. For the remainder of the PhD program, the student is funded on a Research Assistantship (RA) by their research advisor.

The Dean’s Fellowship is not renewable, but each recipient can expect continued support in the subsequent years provided that he/she makes good progress toward completion of the doctoral degree. No specific teaching or research service is required of Dean’s Fellows, but recipients are expected to establish research goals with a research advisor during the first year of study.

All applicants to the PhD program are automatically considered for the Dean’s Fellowship award, and no special application is required. Potential recipients are nominated by each department.

Research Assistantship (RA)
The most common funding mechanism after the first academic year is a Research Assistantship (RA). RAs are offered by individual faculty members with sponsored research grants. An RA is a member of a research group in a laboratory or center. The position offers a close association with members of the faculty and is an effective arrangement for graduate study. Work on the dissertation project is normally part of a Fellow’s assignments. RAs are expected to work full-time, with time allowed for courses during the academic year. RAs are paid weekly.

Gap Funding
If a research advisor is unable to provide funding to the student immediately, or if there will be a gap in the funding they have available at any point, the advisor should apply for gap funding from the department chair. If approved, the gap funding normally takes the form of a teaching fellowship. Gap-funded teaching does not count towards the regular teaching program requirement. The advisor needs
to fill out a gap funding form and to notify the student, the graduate chair and the Academic Programs Manager well ahead of the needed gap funding to allow for incorporation of the student into the teaching rotations. Typically these assignments are made in October for Spring teaching and in April for Fall courses.

**External Fellowships**

ECE encourages PhD students to seek internal and external fellowships from reputable sources that will enhance their careers and provide financial support toward their tuition and stipend. If awarded an external fellowship, the student is expected to accept external funds in lieu of internal fellowships and assistantships. In the event that an external award is less than the ENG stipend rate, the College will supplement it to make up the difference. Tapping into these external sources allows the College to support the greatest possible number of eligible students, while also enhancing the research environment and impact. A student who accepts such fellowships should check to make sure there no stipulations from their funding agency that are at odds with the ECE PhD program.

**Internal Fellowships**

There are several BU Fellowships an ECE PhD student is eligible to apply or be nominated for. Some fellowships give extra support for a student, e.g. for travel or supplies, while others are full graduate fellowships covering the stipend, tuition, etc. The deadlines change each year but the historical dates are noted below. Check the program websites below for up-to-date information.

- **Hariri Fellowship** Deadline ~ March
- **Clare Boothe Luce Fellowship** Deadline ~March
- **BUnano Fellowship** Deadline ~May

**PhD External Funding**

It is in the best interests of PhD students and their advisors for students to seek independent funding. Granting agencies and the outside world consider such funding a critical sign of a strong department. To remain competitive, and to increase the number of NIH and NSF fellowship holders in the department, ECE will provide a $1500 annual bonus to students for every year they are funded by the external source. Students must reapply each year to receive the bonus. *ECE PhD Bonus Policy for an external funding source*. Graduate Students have external funding opportunities *ENG Funding Opps* to help support their graduate education and research at Boston University. The external funding opportunities are organized based on their application deadline. Please read each entry carefully to determine eligibility and application requirements.

The following databases are maintained by other institutions but are publicly searchable:

- Cornell University
- Duke University
- Harvard University
- UCLA
**Departmental Travel Awards**
A student who plans to give an oral presentation at a conference may apply for a $250 travel award, and an additional award of up to $250, if matched by their PI. Successful recipients must present receipts to claim their award. [https://ece.wufoo.com/forms/ece-business-and-travel-expense-report/](https://ece.wufoo.com/forms/ece-business-and-travel-expense-report/)


**PhD Travel Award**
The ECE Department has set aside a limited amount of money for the academic year to support PhD student travel for those who have achieved PhD candidacy. Travel must be to a conference that provides recognition to the PhD student, the ECE department, and to Boston University. Awards are made on a first-come, first-served basis and should be requested at least two weeks in advance of the travel date. Only one award is given to a student for the duration of their PhD program.

If approved, the department will provide an initial $250. In addition, the department will match the student’s advisor’s contribution up to $250 (i.e., the maximum award from the ECE is $500). Requests may be made by filling out the PhD Travel Award Request Form. Please note that you need the following documents to submit in the form:
- The letter/email of your presentation acceptance
- Copy of your abstract
- Anticipated amount of financial support to be provided by faculty (if applicable)
- The grant source number to be charged.

**Financial Information**
A student receiving any form of financial support for graduate studies is not permitted additional employment without prior written approval from both the student’s advisor and the ECE Graduate Committee. These forms of financial support include BU Fellowships (Dean’s, ECE, Hariri, BUnano...) Training Grant Fellowships, Research Assistantships and other external Fellowships (NSF, NIH, foreign government fellowships or other foundations).

**Stipend Paychecks**
A student is expected to have a bank account in the United States. Direct Deposit of payments to your bank account is the norm for most students. (Please note that a Social Security Number is required for Direct Deposit: international students should apply for one as early as possible.) If you elect not to use direct deposit, or while you are waiting for your SSN, paychecks can be picked up at the “Paycheck Express” counter located in the First Point Lobby, 881 Commonwealth Ave, 2nd Floor. Paychecks are issued on the Friday following each week of work.

**Doctoral Research Fellowships**
A first-year PhD student with a standard BU fellowship (Dean’s, ECE, etc.) should secure a funded Research Assistantship no later than the end of their first academic year (April 30). Research Assistantships and academic obligations constitute a full-time commitment. In exchange for the stipend provided, the student agrees to work a minimum of 20 hours/week during the academic year, and 39
hours/week during the summer term. Because this appointment is considered employment, the student should be aware that taxes may be deducted from the stipend portion of their award. The student must have prior written approval from their research advisor and the Associate Division Chair before undertaking any other employment, either inside or outside the University. The student must also sign the University’s standard patent agreement form.

As an RA, the student will receive a tuition scholarship for credits leading toward their degree during the period of employment. They must obtain written approval from their advisor if they wish to register for coursework in excess of 10 credit hours per semester. The student is required to register for each semester in a timely manner and complete required payroll forms as requested.

PhD students may only work under one Research Assistantship at a time.

Research Assistants are paid weekly; this breaks down to 17 weeks in the Fall and Spring and 18 weeks in the summer. Fall semester paychecks are issued from September through December, Spring semester paychecks are issued from January through April, Summer paychecks are issued from May through August.

**International Students**
An international student’s visa and work-permission status must be up to date before they can begin work. US visa regulations prohibit any additional work, either on or off campus, during the duration of the RA appointment.

**US Citizens and Permanent Residents**
The RA scholarship is a form of financial aid and may affect eligibility for certain need-based funds, including but not limited to: Direct Loans, Federal Work-Study, and Perkins Loans. If the student has already received need-based funds prior to the RA appointment, the terms of their financial aid package may be adjusted.

**College of Engineering Policy on Stipend Levels**
All incoming PhD students on a fellowship will receive the same monthly stipend at the base rate. Upon achieving candidacy, PhD candidates will receive a stipend increase of 5% above the current base rate. PhD candidates will receive an additional 5% increase once 1) they fully pass the Prospectus Defense and 2) complete the Responsible Conduct of Research (RCR) training. Stipend increases will be implemented at the beginning of the next semester (Spring, Fall, or Summer) following achievement of eligibility.

**Payroll**
The Academic Programs Manager will coordinate with the ECE Finance Manager to make sure that student funding is set up each semester prior to the account settlement date. In order to be set up on Payroll, students must register according to the Student Payroll-Related Deadlines [Student Payroll-Related Deadlines](#). First-Year PhD students must notify the Academic Programs Manager when a research advisor and summer funding is confirmed. If the information is not communicated, the student will not be set up on Student Payroll.
• **Fall Payroll:** Continuing students must be registered and have a DRF by July 1 in order to be set up for the fall semester on time.

• **Spring Payroll:** Students must register by December 1 and have a DRF commitment by November 1 in order to be set up for the spring semester on time.

• **Summer Payroll:** All students must register for fall by April 1 and have a DRF commitment in order to be set up for summer Payroll on time. (PhD students graduating in September must register for 2 credits of research in SUM1.) First-Year Students must have a research advisor and funding secured by April 30.

**Tuition**
RAs supported full-time by a faculty’s sponsored research grant receive tuition coverage up to 18 credits. RAs who have completed their course requirements may still take courses but must inform their advisor. (Please note that any credits past the first 18 will not be covered.)

**Summer Stipends and Tax Withholding**
PhD students must be registered for EC900S or EC991S for the Summer I term (2 credits) prior to the start of the summer session. International students must also pre-register for the fall semester, prior to the start of the summer term.

Students funded on fellowships other than NIH will have FICA taxes withheld from their paychecks during the summer (May, June, July, and August).

Students will find information about Direct Deposit, International, U.S. Citizen, and Permanent Resident, and Student Employment forms under [Student Resources](#).
Registration Requirements

Registration
A PhD student is required to register each semester (fall, spring, and summer) unless on an approved Leave of Absence. The registration deadlines are found here. Failure to register with full-time status before the registration deadline will result in automatic removal of the student from the payroll, and the student will also incur late fees.

Full-Time Status
Full-time status is achieved either by registering for 12-18 credits for a given semester, or via full-time certification for a student who is no longer taking a full-time course load. A post-B.S. PhD student is expected to take 12 credits of ECE courses (including research) during the first semester, and, typically, 8 credits of coursework and 4 credits of research the second semester. After the first year, the PhD student registers for a mixture of courses and research credits each semester until completion of all credit requirements. When an ECE PhD student has completed all credit requirements, they should register for four credits of EC900 or two credits of EC991 for the remainder of their program. This provides certified full-time status. All PhD students must maintain full-time status throughout their time in the program, with the sole exception of an authorized Leave of Absence.

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. In order to graduate, a student must be registered as full or a part-time student in the semester in which they complete degree requirements and in the preceding semester.

Leave of Absence/Withdrawal
A student must register for each academic semester 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/Leave of Absence form to the Graduate Programs Office.

A student is allowed a maximum of two semesters of leave without having to re-apply to the program. Beyond two semesters, the student must submit a petition approved by the advisor and the Department Graduate Associate Chair. The period of authorized leave of absence is counted as part of the time allowed for completion of degree requirements.

An international student must also contact the International Students and Scholars Office when taking a leave of absence or when withdrawing from the University.

Childbirth and Adoption Accommodation for a Full-time PhD Student
The childbirth and adoption accommodation policy for a full-time or certified full-time PhD student in good academic standing provides for extensions for academic coursework and other requirements to the primary caregiver of an infant or adopted child. It also provides for a continuation of stipend support for a funded student during the accommodation period. Please contact the Graduate Programs Manager for the form. Additional information: http://www.bu.edu/academics/policies/childbirth-and-adoption-accommodation/
Course Work Requirements

GPA Requirement
A PhD student is required to maintain a grade point average (GPA) of 3.0 or higher to remain in good academic standing. Grades of C+ or below will not count towards fulfilling any requirements for the PhD programs. However, all grades are included in a student’s GPA. A student who has a lower grade point average will be put on academic probation and will have to improve the GPA to 3.0 or above to regain good academic standing.

Credit Requirements for Post-BS PhD Students

The post-BS PhD program is a 64-credit program of which 32 credits must satisfy MS Electrical Engineering or MS Computer Engineering program requirements. Additionally, a minimum of 16-research credits (EC900, EC991) must be completed to meet the 64-credit requirement. The student may take graduate-level technical courses applicable to their research outside of the department, e.g., ME, MSE, BME, CS or PY graduate courses in consultation with their research advisor. The 4-credit practicum requirement for an MS degree may be satisfied with 4 credits of EC900 research work. All students must apply for graduation and complete the required tasks in order to receive the Master’s degree.

Course Expectations for First-Year Post-BS PhD Students

The course load for a first-year student will vary depending on whether the student is already committed to a research advisor, or still exploring options. If the student is trying out advisors, the expectation is that the student will take two or three courses in the first semester, and two courses in the second semester in addition to 4 credits of research with their research advisor.

Examples for a First-Year, Post-BS PhD Student
Possible semester load:
3 EC graduate courses (3×4) + EC890/891 ECE Seminar, (1) = 13 credits
2 EC graduate courses (2×4) + EC900 Research, (4) + EC890/891 ECE Seminar, (1) =13 credits
2 EC graduate courses (2×4) + EC890 Teaching, (4) + EC890/891 ECE Seminar, (1) =13 credits
1 EC graduate course (4) + EC890 Teaching, (4) +EC900 Research, (4) + EC890/891 (1) =13 credits.
Summer: EC900 Research (2) with a research advisor.

Credit Requirements for Post-MS PhD Students

The Post-MS PhD Student is required to complete 32-credits applicable to their degree. Of those 32 credits, 8 structured credits must be from ECE graduate-level courses (EC500- or EC700-level) in compliance with TPC requirements and are expected to support the intended research area. A minimum of 8 credits of research or dissertation credits (EC900, EC991) is required. No courses can be transferred in from another university to reduce the 32-credit requirement.

A Post-Master’s PhD student, who obtained their Engineering Masters degree at Boston University may petition to release up to 8 credits not used for their Master’s degree to their PhD program. Only credits that are applicable to degree requirements are acceptable (EC500 and EC700-level with a 3.0 GPA or better in order to satisfy TPC requirements) The student must submit a Graduate Petition Form to the Academic Programs Manager for processing.
PhD students, who have completed all credit requirements, must register for a minimum of two 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 PhD program. Only grades of P, F, or J will be assigned to research or dissertation credits.

**Examples for a First-Year, Post-MS Student:**

*Possible semester load:*

- 2 EC graduate courses (2×4) + EC890/891 Seminar, (1) + EC900 Research, (4) = 13 credits
- 1 EC graduate course (4) + EC900 Research, (4) + EC890/891 EC Seminar (1) + full time certification
- EC900 (Research, 4) + EC801/802 (Teaching, 4) + EC890/891 (EC Seminar, 1) + full time certification

*Summer: EC900 (2) with research advisor.*

**Research Credit Courses: EC900 and EC991**

An ECE PhD student who has earned candidacy should be registered for 4 credits of research credits every academic semester by submitting an EC900/991 form to the Program Manager. During the summer, the student should be registered for 2 research credits. The exception is if the student is taking an internship (off-campus work), in which case the student should register for 4 credits of EC810 only.

EC900 denotes pre-Prospectus research, and EC991 denotes post-Prospectus research.

Only grades of P, F, or J (Pass, Fail, or continuing) will be assigned to research credits.

**Physical Education Classes (PDP)**

While the student is registered for a full-time course load (12 credits) they may add PDP classes at no extra cost, as long as the total credits are below 18.

**Internships in Electrical and Computer Engineering**

An approved internship is a valuable opportunity for a student to gain practical experience integral to their program of study, thereby allowing them to develop additional technical and professional skills.

**Requirements and Grading**

The internship site and project must be approved by the student’s faculty advisor. The student should register for the internship course **EC810**. The student must have completed 2 full semesters before registering for this course and embarking on an internship.

**International Students**

An approved internship is a valuable opportunity for a student to gain practical experience integral to their program of study, thereby allowing them to develop additional technical and professional skills. Many PhD students engage in summer internships in the post-prospectus dissertation phase of their program of study.

Students find internships in a variety of ways, most often through their research advisor’s professional network, including alumni and industry connections. Students may also work with the **College of**
Engineering Career Development Office to find other opportunities. Handshake is the Career Development Office’s online system for job and internship listings, which is exclusively for BU undergraduate students, graduate students, and alumni.

Requirements and Grading
All students must have completed 2 full semesters before registering for EC810 and embarking on an internship. The internship site and project must be approved by the student’s faculty advisor and the PhD Associate Chair*. Students are registered for the EC810 Internship course by the Academic Program Manager. After completion, students submit an ECE PHD Internship Summary to be graded Pass or Fail. Student internships are highlighted in the Student Spotlight section on the ECE website.

International Students *
International Students need to be authorized for Career Practical Training (CPT) for an internship placement. In order to apply for CPT authorization, international PhD students need to follow these steps prior to going to ISSO:
- Secure a job offer and obtain a written offer letter.
- Complete a CPT Form (sections 1, 2, 3 only and the Student Acknowledgement page)
- Submit the completed CPT form along with a supporting letter (Sample Support letter from Advisor) to the Academic Programs Manager

The support letter must include:
- Topic of thesis and expected defense date,
- Start and end dates of internship (keep in mind that CPT must follow semester calendar dates and can only be authorized one semester at a time),
- Explanation of the research objectives of the placement as they relate to the student’s thesis or dissertation and why they cannot be accomplished using Boston University facilities,
- Name of the faculty advisor, who will monitor the progress of the off-campus research,
- Signature of faculty advisor AND co-signature of ECE PhD department chair, Anna Swan
- Once your CPT recommendation is complete, the College of Engineering will review notified to pick up your application at Graduate Programs Office, 44 Cummington Mall and may proceed to ISSO. You will be registered for EC810 by the Academic Program Manager.

You may request CPT authorization from the ISSO in one of two ways:
- Call the ISSO at 617-353-3565 to schedule a CPT appointment with your ISSO advisor, or
- bring the completed and signed CPT Form and Acknowledgement along with F-1 immigration documents to request drop-off processing of the CPT request. Completed requests will be evaluated for approval within five business days.

After CPT Authorization
Once you have been granted CPT authorization for a specific placement, make certain to read ISSO FAQs for CPT, which answers many frequently asked questions related to the limits of CPT authorization, fair labor standards for unpaid internships, and rules for employment verification and taxation for paid placements.
**ECE’s Qualifying Examination: TPC and RPC**

The ECE PhD qualifying process is designed to provide feedback to the department regarding the suitability of the student to the PhD program, and on areas that need improvement. Likewise, the preparation and examination provide opportunities for the PhD student to acquire and demonstrate skills that will be important for their research. Failure to satisfy the requirements of the ECE PhD Qualifying Process results in withdrawal of the student from the PhD program.

The **ECE PhD qualifying process** requires the first-year PhD student to satisfy a Research Preparation Criterion (RPC) that is based on reading and presenting a research paper and a Technical Preparation Criterion (TPC) that is based on coursework. The ECE PhD qualifying process is designed to provide feedback to the department regarding the suitability of the student to the PhD program, and on areas that need improvement. Likewise, the preparation and examination provide opportunities for the PhD student to acquire and demonstrate skills that will be important for their research. Failure to satisfy the requirements of the ECE PhD Qualifying Process results in a withdrawal of the student from the PhD program.

**Technical Preparation Criterion (TPC)**

The student is required to demonstrate sufficient technical preparation and adequate learning through their coursework (TPC). In order to satisfy the TPC, the student needs to earn a GPA of at least 3.7 across a set of eligible ECE graduate courses. All EC500 and EC700 level courses satisfy the TPC criterion. However, at least one of these courses must have a strong analytic/theory component. It is expected that the courses chosen to satisfy the TPC requirement are relevant to the student’s future thesis work. The requirement differs for post-B.S. and post-M.S. students both in a number of courses and a timeline.

**Post-BS PhD** – The student is required to satisfy TPC within their first 3 academic semesters by obtaining a GPA of at least 3.7 across 4 eligible ECE graduate courses.

**Post-MS PhD** – The student is required to satisfy TPC within their first 2 academic semesters by obtaining a GPA of at least 3.7 across 2 eligible ECE graduate courses.

**Research Preparation Criterion (RPC)**

The student is required to satisfy the RPC by passing a ~1.5-hour oral examination in which 3 ECE faculty members assess the research abilities of the student. Regular RPC exams are held at the end of the spring semester of the first year in the PhD program, however, students actively engaged in research may opt for the Early RPC exam in March of the second semester. The assessment is carried out in the context of a research article from the field of the student’s intended PhD research. The presentation of the research article provides a starting point for exploring the general research area. The student is expected to know the research context of the article, be able to demonstrate an understanding of the general field, and be able to suggest and evaluate some potential research directions. A Leave of Absence will not exempt an individual from completing the RPC examination at the end of their second academic semester in the program. If the student fails or conditionally passes, the student can retake the exam later that same summer.
Any student who does not pass the oral examination on their first attempt is allowed one additional attempt later that same summer; a second failure results in withdrawal from the program. The student does have the right to petition the outcome of the second failed exam. The petition MUST be completed within one week (5 business days) after notification of failure, and must first be reviewed and approved by the student’s faculty advisor. It will then be reviewed at both the ECE Doctoral Committee and the College Graduate Committee.

A PhD student is eligible for PhD candidacy upon successfully completing both the TPC and RPC requirements AND submitting a PhD Candidacy Application to the Academic Programs Manager for department review. When the application has been approved, the candidate will receive formal notification from the ECE Department. The date on which a student achieves candidacy is the basis for their prospectus defense and dissertation defense deadlines (start of the Fall or Spring semester, respectively). The student’s pay level will be “Post Qual” and a stipend-level increase will become effective in the next semester after becoming a candidate. The student’s next PhD milestone will be the Prospectus Defense, which must be completed within 2 years of obtaining candidacy. The PhD student enrolls for pre-prospectus research credits (EC900) until they pass their prospectus defense.

PhD students are reviewed annually starting with their second year in the ECE department. In January, before the spring semester starts students complete an ECE Annual Student Research form detailing their progress during the past year and set goals with the faculty advisor for the upcoming year to meet Satisfactory Academic Progress. Each student is evaluated and receives a grade. Students who receive an unsatisfactory grade will meet with their advisor and the ECE Grad Chair in order to receive feedback and set goals for the next year.

Expiration of Candidacy
PhD candidacy will expire on its fifth anniversary. The student should plan to finish and defend their thesis well in advance of this deadline.

If it becomes clear that this will not be feasible, the student and the advisor need to agree on a plan to complete the degree the semester before the last semester of valid candidacy. This plan should be discussed and approved by the prospectus committee and submitted to the Graduate Committee. The petition should include the student’s CV, the accomplishments so far, and the plans and timeline for completion as approved by the advisor and prospectus committee. Note that there are no committee meetings scheduled during the summer so that a September deadline needs to be addressed during the previous April. 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 advisor that he/she approves of the plan. The petition will be reviewed by the Graduate Committee and the student will be advised in writing of the outcome.
ECE PhD Candidacy

A student is eligible for PhD candidacy upon successful completion of both the TPC and RPC requirements. The student needs to formally apply for candidacy before the September (or January) after completion. When the application has been approved, the candidate will receive formal notification from the ECE Department.

- A post-MS PhD student must achieve candidacy by the start of their second fall semester.
- A post-BS PhD student must achieve candidacy by the start of their second spring semester. A post-BS PhD student may apply for candidacy at the start of their second of the fall semester.

The date on which a student achieves candidacy is the basis for their prospectus defense and dissertation defense deadlines (start of the Fall or Spring semester, respectively).

Expiration of Candidacy

PhD candidacy will expire on its fifth anniversary. The student should plan to finish and defend their thesis well in advance of this deadline.

If it becomes clear that this will not be feasible, the student and the advisor need to agree on a plan to complete the degree the semester before the last semester of valid candidacy. This plan should be discussed and approved by the prospectus committee and submitted to the Graduate Committee. The petition should include the student’s CV, the accomplishments so far, and the plans and timeline for completion as approved by advisor and prospectus committee. Note that there are no committee meetings scheduled during the summer so that a September deadline needs to be addressed during the previous April. 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 advisor that he/she approves of the plan. The petition will be reviewed by the Engineering Graduate Committee and the student will be advised in writing of the outcome.

Responsible Conduct of Research (RCR)

All College of Engineering PhD students are required to complete the Advanced Responsible Conduct of Research program prior to completing the Prospectus. The Advanced RCR program includes an online module and live-discussion workshops. Information about the modules and a registration link are online. The workshops are run three times a year in October, February and June, and fill up quickly.

Teaching Practicum: EC801 and EC802

All ECE PhD students are required to teach for two semesters. Typically, the first teaching assignment (EC801) is during the second year and the second assignment (EC802) is during the third year. During the semester in which the student is enrolled in EC801 or EC802, he/she may only register for 8 credits (e.g. EC801 or EC802 plus 4 credits of EC900 unless they receive permission from their research advisor.
ECE Prospectus Defense Requirements and Guidelines

In the prospectus, the student will outline their proposed research for their dissertation. The student must be familiar enough with the field of study to know the most prominent current work and to pick a dissertation topic. The prospectus requires a written document and an oral departmental presentation to a committee. The student will invite faculty to form their prospectus committee that will also serve as the dissertation committee. The committee will evaluate the prospectus and may recommend further preparation, or grant approval.

Prospectus Defense Timeline
A student is required to present their prospectus defense within two years of attaining candidacy. In no instance will a student be allowed to present a prospectus defense until they have become a PhD candidate. All College of Engineering PhD students are required to complete the Advanced Responsible Conduct of Research (RCR) program prior to completing the Prospectus and before they can receive the post-prospectus stipend rate increase.

Prospectus Defense Topic
A research problem is selected after discussions between the faculty research advisor and the student. For the prospectus defense, the student is expected to understand literature and state-of-the-art work in their specific area as well as propose and motivate a research topic in the prospectus defense. At that time the student will assemble a prospectus committee in consultation with their research advisor. The student registers for pre-prospectus research credits (EC900) until sufficient investigation of the topic has been undertaken to believe the subject is worthy of a dissertation.

Prospectus Defense Committee
The prospectus committee will consist of a minimum of three tenured or tenure-earning ECE faculty, one of whom may be an affiliated faculty member. In addition to the 2 ECE faculty minimum, the committee can also hold faculty members outside the department if the expertise is fitting.

The composition of the prospectus committee is to be reported to the Associate Chair of Doctoral Programs by the student prior to scheduling the prospectus defense. One member of the committee will be assigned by the department to serve as prospectus defense chair. The prospectus defense chair must be a tenured or tenure-track ECE faculty, who is not the student’s research advisor.

Occasionally scholars from outside the University serve on ECE dissertation committees. When a committee member is from outside the University the student must Request a Special Service Appointment. A copy of the scholar’s vitae and the completed form, with the ECE Graduate Associate Chair’s approval, must be submitted to the Associate Dean for Research and Graduate Programs. The student will be notified in writing of the approval or disapproval of the special appointment. If an external scholar’s appointment is approved for a prospectus defense committee, the approval automatically transfers to the student’s dissertation committee.

Prospectus Written Guidelines
The student must provide a copy of the prospectus document to all members of the prospectus committee a minimum of three weeks ahead of the planned oral defense dates. The preferred format is similar to that of proposals submitted to a Federal Agency.

Students should refer to the following ECE Prospectus guidelines:
A title page should contain the proposed title, author’s name, research advisor’s name and an abstract of approximately 350 words.

The proposal should specifically document the anticipated contribution that this work will have to the wider body of knowledge.

There is a 10 page limit on the scientific portion of the proposal, which includes tables and figures but does not include the title page, the bibliography or the student’s CV.

Use single-spaced at 11-point font size.

Students should consult the College’s Guide for Writing Theses & Dissertations and the Introduction to LaTeX for guidance. Click to download .tex template.

Additionally, a Prospectus Template may prove helpful, as well as the Prospectus example.

Suggested content includes a statement of the problem to be investigated; background, current status, and significance of the proposed work; approach(es) to be followed for its resolution; preliminary results, and an anticipated timetable for completion. The work should be annotated with pertinent citations that should also be listed in the bibliography. An up-to-date copy of the student’s curriculum vitae should be included (this does not count towards the 10-page limit). The student is expected to have created a Google Scholar profile at the time of the prospectus.

Prospectus Defense Scheduling

After reading the prospectus and agreeing that the student is ready to defend the proposal, all prospectus committee members indicate their approval by signing the PhD Prospectus Defense Form. It is the student’s responsibility to obtain the necessary committee members’ signatures and set a date and time for the presentation. The student is responsible for reserving a room for the presentation via 25Live. When all this has been completed and noted on the PhD Prospectus Defense Form, the form (with abstract attached) is submitted to the PhD Graduate Chair for final approval. The form must be submitted no less than two weeks before the oral prospectus presentation date. It is the prospectus chair responsibility (not the research advisor) to bring the original form containing the committee members’ signatures to the oral presentation.

Prospectus Defense Oral Presentation

The title, location, date, time and abstract of the prospectus defense must be submitted to the Academic Program Manager, together with a signed copy of the PhD Prospectus Defense Form, no less than two weeks before the prospectus defense date.

It is the ECE Department’s responsibility to provide adequate publicity for the student’s prospectus defense and assign a committee member to serve as chair of the prospectus defense.

The chair of the prospectus defense will introduce the student, including a brief description of their academic background. The student should restrict the length of the presentation to approximately one hour. During this period, committee members or the audience may ask clarifying questions. The chair should guard against digressions and inappropriate questioning during the presentation, but invite questions from the audience after it is complete. Following a reasonable public question period, the general audience will be excused while the committee remains to complete its assessment of the prospectus defense.
**Prospectus Defense Assessment**

The prospectus committee is charged with assessing the appropriateness of the problem and the student’s preparation based on the written 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 coursework is required, such conditions must be appropriately documented and attached to the PhD Prospectus Defense Form. Required revisions to the proposal should be completed satisfactorily before a final “Pass” grade is given. If the

Before the prospectus defense ends, the committee must indicate on the PhD Prospectus Defense Form the date for the next committee meeting (at least once in the following 12 months) and indicate expected milestones to be completed by that date.

Before the prospectus defense concludes, the committee members will also submit an assessment of the student’s technical and communication skills. This assessment will not be identified with the specific student, and will only be evaluated in aggregate form for the purposes of evaluation of the PhD program.

**Prospectus Defense: Assessment and Reporting**

The chair of the committee will complete the “Prospectus Defense Results” sections on the 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. This attachment should also contain a timeframe for completion. The Chair then signs the PhD Prospectus Defense Form and returns it to the Academic Program Manager to be signed by the ECE Graduate Chair. It is also the chair’s responsibility to ask each committee member to complete a Program Evaluation at Prospectus form.

The Academic Programs Manager will record and 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.

**Post Prospectus Coursework and Progress**

A post-prospectus student will be paid at the highest salary level at the start of the next semester. A post-prospectus student is allowed to complete dissertation work applicable to their degree outside of BU. After passing the Prospectus Defense, students will enroll for four credits of EC 991 Dissertation each semester until the total credit requirement is met (64 credits for Post-BS, 32 credits for Post-MS). Once the student has fulfilled the total minimum credits requirement, he/she will be registered for 2 credits of EC 991 by the Academic Program Manager each semester until they graduate.

Post-BS PhD students may satisfy the 4-credit practicum requirement of Master of Science degree requirements for Electrical Engineering and Computer Engineering with 4 credits of EC900 research in the semester of the student’s successful prospectus defense. Students are responsible for applying for graduation after those steps are met. All students must apply for graduation and complete the required tasks in order to receive the Master’s degree.
A post-prospectus student must schedule an annual check-in with all members of their prospectus defense committee. The first meeting should be scheduled at the prospectus defense and should be set within a year. The date should be indicated on the Prospectus Defense Form. At each subsequent meeting, the student will discuss progress and possible roadblocks with the committee and determine new milestones. The student will turn in a copy of the signed Online Yearly Dissertation Research Progress Report Form and an updated CV to the Academic Programs Manager. The ECE PhD Graduate Committee will use the reports in aggregate form for a yearly assessment of the PhD.

Annual Progress Reports

The student must schedule an annual check-in with all members of their prospectus defense committee. The first meeting should be scheduled at the prospectus defense, and should be set within a year. At each subsequent meeting, the student will discuss progress and possible roadblocks, and new milestones will be determined. The student will turn in a copy of the signed progress report form and an updated CV to the PhD Program Manager.

The reports will be used in aggregate form for a yearly assessment of the PhD by the ECE graduate committee.

ECE Dissertation Defense

PhD candidates are expected to prepare and carry out an independent and original research project in their field of study in partial fulfillment of the PhD requirements. The dissertation will be primarily guided by their research advisor, with the advice of the prospectus defense committee members. The student shall present 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 is related to the dissertation. The student is expected to read and follow the latest edition of the Research Guide for the Writers of Theses and Dissertations. Although the student will have an opportunity to make final revisions to the dissertation and abstract after their final oral examination, they should not regard version used for their defense as a “rough draft.” This version of the abstract is the version circulated to all ECE graduate students, ECE faculty, and members of the examining committee. No student will be allowed to defend a completed PhD dissertation if they are not a PhD candidate, which includes the residency requirement.

Final Dissertation Defense: Committee

It is the candidate’s responsibility, in conjunction with their research advisor, to appoint a defense committee with a minimum of five members. The core of the committee consists of the same tenured or tenure-earning faculty who participated in the prospectus defense, to make up a minimum of four readers. If necessary, more members can be added. Just as for the prospectus committee, a minimum of two members must be tenured or tenure-earning ECE faculty. An affiliated faculty member may be the third engineering faculty member on the committee. The chair, who cannot be a reader, is assigned by the department. An ECE PhD student’s dissertation chair does not have to be a member of the student’s academic department/division, but must be a member of the College of Engineering. It is the student’s responsibility to arrange a meeting with this departmentally-assigned chair prior to the defense.
In the event that it is necessary to replace a committee member, e.g. due to a faculty member having left BU, the candidate should fill out a petition to change the composition of the committee from the original members.

When adding a scholar to the committee from outside the University, a Request Special Service Appointment must be completed and submitted to the Academic Programs Manager, with a copy of the scholar’s CV. The student will be notified in writing of the approval or disapproval of the 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 procedure was not followed at the time of the prospectus defense, it will need to be done prior to scheduling the final dissertation defense. This is a College of Engineering policy that applies to all PhD students.

**Final Dissertation Defense: Written Guidelines and Formatting**

Candidates shall demonstrate their abilities for independent research and scholarship by completing a doctoral dissertation in their field of study. The dissertation will be primarily guided by the first reader (advisor), with the advice of the other members of the dissertation defense committee. The dissertation should represent original scientific/engineering contributions that are appropriate for publication in a recognized peer-reviewed journal. The dissertation is defended at a presentation open to the entire BU community.

The Mugar Library stipulates that all dissertations submitted at Boston University must have consistent formatting. Refer to the Guide for Writers of Theses & Dissertations while preparing the dissertation and its abstract. These must conform to the requirements of the University Microfilms International. Additionally, the library’s website also includes other useful resources such as instructional videos and templates. For further questions or field specific requirements we suggest reviewing recently submitted dissertations by peers as approved examples of the formatting requirements.

**Final Dissertation Defense: Scheduling**

The Dissertation Defense 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 the significance of the results. 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 expertise in his/her field of research specialization.

It is the candidate’s responsibility to select a defense date based on the availability of all committee members and inform the Academic Program Manager of both the date and the composition of the committee. Candidates must adhere to the current deadlines for completing the final oral examination and submitting their dissertation., location and time with all the Dissertation Defense Committee members for the examination. Conference room reservations can be requested via 25Live.
At least two weeks prior to the Dissertation Defense date, the candidate must submit the PhD Final Oral Examination form to the Academic Programs Manager. Before submitting this form, the candidate must have provided a copy of the dissertation document to all members of the Dissertation Committee and obtained their ORIGINAL signatures on the form indicating 1) that they have been provided a copy of the dissertation and 2) agree that it is ready to be defended. This form must also contain the date, time, location and the dissertation abstract (maximum of 350 words). The student must also provide one copy of the dissertation abstract electronically to the Academic Programs Manager at this time. Students undergo final oral examinations in which they defend their dissertations as valuable contributions to knowledge in their fields and demonstrate a mastery of their fields of specialization in relation to their dissertations.

Dissertation Formatting

The Mugar Library stipulates that all dissertations submitted at Boston University must have consistent formatting. They have created a Dissertation Formatting Guide that outlines these requirements. Additionally, they have created Samples of Preliminary Pages, which will help to show these requirements in practice.

The library’s website also includes other useful resources such as instructional videos and templates. For further questions or field specific requirements we suggest reviewing recently submitted dissertations by peers as approved examples of the formatting requirements.

At least three weeks before your defense you must submit a draft of your dissertation as a PDF to theses@bu.edu for a format review. Please follow all formatting requirements stated in the library guide while preparing your dissertation draft, and include all required elements such as the preliminary pages, references, and your CV. You will be notified if the format is approved or if any changes are required. It is advised that all formatting issues be resolved before you defend your dissertation. Following your defense, please allow ample time to complete all requirements and content revisions that are required by your committee.

Final Dissertation Defense: Oral Presentation

No final oral examination may begin unless all approved committee members, as listed on the Final Oral Examination Form, are present. It is the committee chair’s responsibility to enforce this requirement. The student’s faculty research advisor or committee chair should introduce the candidate and include a brief description of their academic background.

The candidate should restrict the length of the presentation to approximately 45-60 minutes. The candidate’s conduct and manner should be professional, and any handouts, slides, etc. should be neatly prepared. During the presentation, clarifying questions 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 the committee or audience members to have side discussions. Following a reasonable question and answer period, the audience will 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 that the committee may complete its assessment of the defense and dissertation.

**Final Dissertation Defense: Assessment and Reporting**

The Dissertation Defense Committee is charged with assessing the completeness of the research, contribution to knowledge, and the candidate’s mastery of his/her research area, based on the written dissertation and the oral presentation. The 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 Dissertation Defense Committee has reached a decision. The chair will advise the student of the committee’s decision. At this time the candidate will be advised of any changes that must be made to the final title, abstract or dissertation document, with a deadline provided by the Dissertation Defense Committee.

The committee and chair will evaluate the technical and communication skills of the candidate via an Program Evaluation at Dissertation assessment form. This evaluation is not tied to the student record. The evaluations are used to assess the PhD program by the Graduate Committee every Fall, for the Office of the Provost’s assessment.

The PhD Final Oral Examination Form must be completed at the time of the presentation, with a specific indication of whether the title, abstract and dissertation are acceptable as submitted. Any required revisions must be noted on the Final Oral Exam form itself or attached on a separate piece of paper indicating a plan for completion attached. Timeframes should be included. Committee members should sign off on the Final Oral Examination Form at this time but should refrain from signing the Approval page until all conditions have been met.

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

The defense chair delivers the signed PhD Final Oral Examination Form, with attachments to the ECE PhD Programs Manager. The Oral Examination Form is reviewed by the Associate Chair of PhD Programs, signed, and recorded in the students file. It is the responsibility of the ECE Office to ensure that all necessary information is recorded with the University.

It is the student’s responsibility to deliver the copies of the dissertation to their research advisor, the ECE office, and the thesis coordinator (theses@bu.edu) at the Mugar Library to satisfy final department requirements. A signature page containing all original signatures are required: one for the department, and one for electronic submission at Mugar Library. Doctoral candidates are also expected to submit the significant results of their research to recognized journals for publication.

The Associate Chair gives final approval on the Final Oral Examination form. The student will then follow the electronic submission guidelines provided by Mugar Library. The Academic Programs Manager will provide departmental approval to the Graduate Programs Office for the student upon seeing the 1)
original signatures page and 2) title page. This will ensure that University records reflect that the candidate has completed all necessary requirements for their PhD degree.

**Final Format Check and Dissertation Library Submission**

Incorporate all changes from your committee and submit electronically by the [Graduate Program deadlines](#): **NOTE**: You can consult the [ETD Administrator Walk-Through](#) for help. Upload the final draft of your dissertation (PDF file) to the [Thesis and Dissertation submission website](#).

Complete the [BU Doctoral Exit Survey](#) and the NSF [Survey of Earned Doctorates](#) (SED). Upon completion of the BU Exit Survey, there will be a link to redirect you to the [NSF SED](#). You must send enggrad@bu.edu a copy of the SED completion certificate you receive. **NOTE**: Both surveys must be received to officially award your degree.

**Graduation**

Students intending to graduate must have met all degree requirements and submit an [application for graduation](#) by the deadline.

The hooding ceremony for PhD students is held once each year, in May. Students who graduate in September or January are invited to the May hooding ceremony following their graduation date. All students must complete the required tasks in order to graduate and confirm their participation in the [College of Engineering Graduate Convocation Ceremony](#).

**Graduation Checklists**

**Departmental Student Awards**

**ECE Department Outstanding Teaching Award**

This award is given based on recommendations from the faculty instructor in charge of the relevant course, as well as student evaluations. Student Teaching Awards are presented at the annual ECE end-of-year party.

**Outstanding Dissertation Awards**

The dissertation work of a PhD student may be nominated by the dissertation committee for the Outstanding Dissertation Award at the time of the defense. A student who graduates in May has the option to delay consideration for the award until the following year. Each student is only eligible to be considered for the award one time. Applications from nominated students from the previous May and current May, September and January graduations are due in April and will be awarded at the May graduation ceremony. Criteria are based on the merit of the scholarly work, publication record and impact. The student should supply their CV, including a link to a Google Scholar profile. The research advisor should provide a recommendation letter, together with a 2-3 sentence non-technical summary of the impact of the work.

This award is offered separately to CE and EE PhD students.
Resources

Electrical and Computer Engineering

Anna Swan – ECE Associate Chair of Doctoral Programs, swan@bu.edu (617) 353-1275
Christine Ritzkowski – Academic Programs Manager, critzk@bu.edu 617)353-1048
Faculty Staff directory - ECE website http://www.bu.edu/eng/departments/ece/people/

Graduate Programs Office Administration (617) 353-9760

Stacey Herman – Director, Graduate Programs Office, dathomanno@bu.edu
Kirstie Miller - Director of Professional Education & Corporate Relations, kimiller@bu.edu
Andrew C. Butler - Assistant Director, Enrollment Services, abutler@bu.edu
Anthony Morejon - Assistant Director, Financial Aid, lholh@bu.edu
Denise Joseph - LEAP Program & Student Relations Manager, dejoseph@bu.edu
David Apostol - Data Analyst/Graduate Records, dapolst@bu.edu
George Zhang - Senior Program Coordinator, hession@bu.edu
?
- Senior Staff Assistant,

Professional Development

Sarah Hokanson Director - Professional Dev & Postdoctoral Affairs Runs professional development workshops open to PhD students http://www.bu.edu/postdocs
Center for teaching and learning has some programs focused on graduate students https://www.bu.edu/ctl/programs/

Health and fitness

Physical health https://www.bu.edu/studenttheyalth/services/
Mental Health https://www.bu.edu/studenttheyalth/counseling/
Fitness https://www.bu.edu/studenttheyalth/facilities/
Disability Services http://www.bu.edu/disability/

Advocacy

Title IX Issues http://www.bu.edu/safety/sexual-misconduct/title-ix-bu-policies/
ENG representative- Ruthie Jean, (617) 353-6447, ruthiej@bu.edu
BU representative - Kim Randall, (617)-353-9286, krandall@bu.edu
LGBTQ https://www.bu.edu/admissions/student-life/community-diversity/lgbtq/
Ombuds http://www.bu.edu/ombuds/

International

ISSO https://www.bu.edu/admissions/admitted/international-students/ioso/
ISSO Contact -Monica Rodriguez, Advisor (617) 353-3565, mrodri@bu.edu
International Community https://www.bu.edu/admissions/student-life/community-diversity/international/

Campus Life http://www.bu.edu/students/ To help you navigate your way through life at BU!
Registration deadline for Service Stipend Recipients (DRF/DTF)

<table>
<thead>
<tr>
<th>Semester</th>
<th>ENG Registration Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2020</td>
<td>8/17/2020</td>
</tr>
<tr>
<td>Spring 2021</td>
<td>12/17/2020</td>
</tr>
<tr>
<td>Summer 2021</td>
<td>4/16/2021</td>
</tr>
</tbody>
</table>

**Graduation Deadlines**

<table>
<thead>
<tr>
<th>Graduation Schedules:</th>
<th>January 2021</th>
<th>May 2021</th>
<th>September 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Official graduation date:</td>
<td>January 25, 2021</td>
<td>May 17, 2021</td>
<td>September 25, 2021</td>
</tr>
<tr>
<td>Dissertation due to the student’s research committee:</td>
<td>Three weeks before the defense date.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diploma application due in the department office:</td>
<td>November 1</td>
<td>March 31</td>
<td>July 1</td>
</tr>
<tr>
<td>Dissertation abstract (350 words) due in the department office:</td>
<td>At least three weeks before the Dissertation Defense date.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schedule of Final Oral Examination due in the department office:</td>
<td>Two weeks before the Final Oral Examination date.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Last date to hold Final Oral Examination:</td>
<td>December 20, 2020</td>
<td>April 16, 2021</td>
<td>August 13, 2021</td>
</tr>
<tr>
<td>Approved and signed dissertations due in the department office:</td>
<td>January 1, 2021</td>
<td>April 23, 2021</td>
<td>August 20, 2021</td>
</tr>
</tbody>
</table>