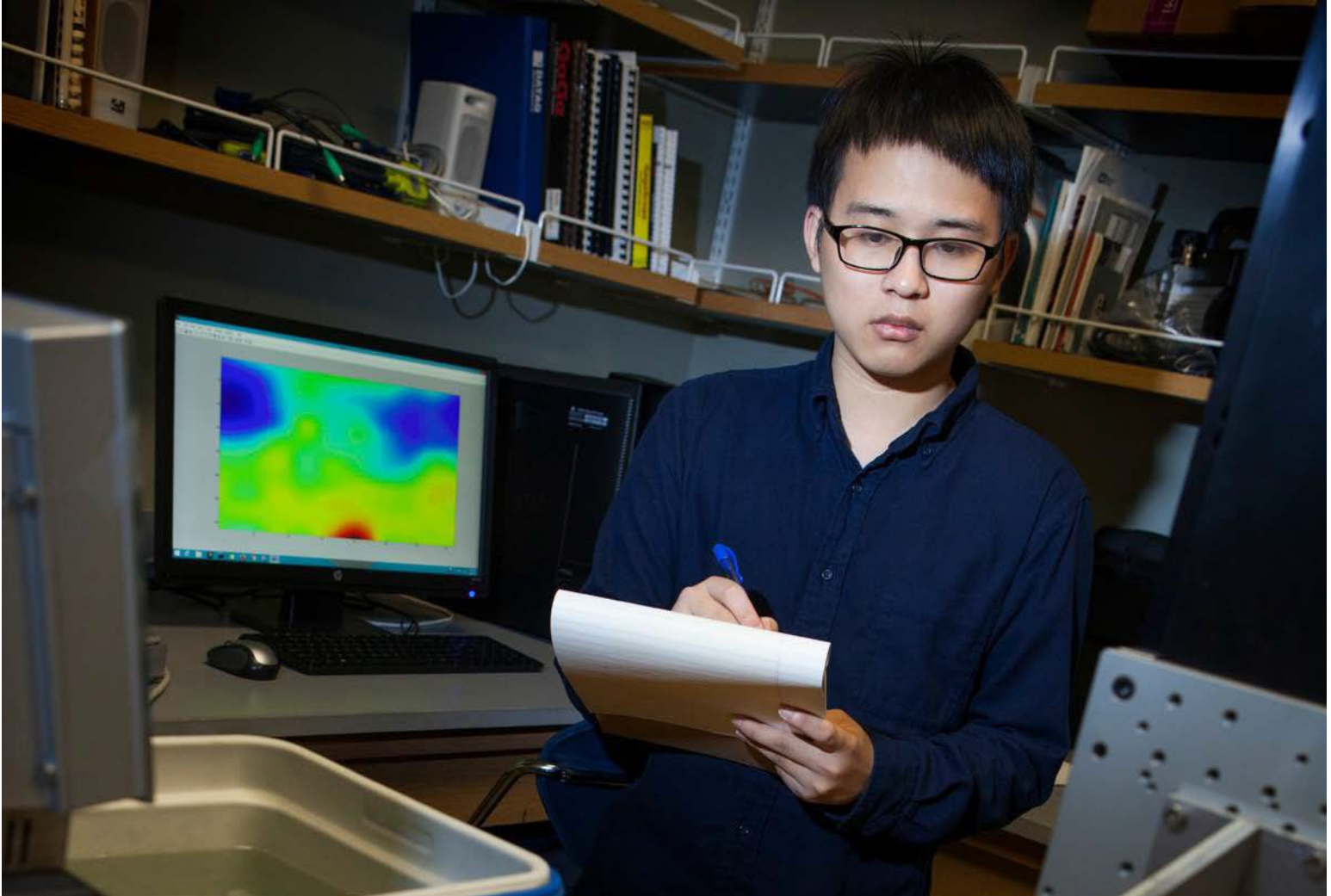


The Department of Electrical & Systems Engineering

Doctoral Student Handbook

2022-2023



ese.wustl.edu

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Welcome to Electrical & Systems Engineering

Greetings! Our doctoral students are critical to our success as a department. We look forward to helping facilitate your progress through our program. You are welcome to contact us at any time if you have concerns or questions.

Sincerely,

Dr. Bruno Sinopoli, *Department Chair*

Dr. James Feher, *Director of Master's Studies*

Dr. Joseph A. O'Sullivan, *Director of Graduate Studies*

Dr. Andrew Clark, *Director of Graduate Admission*

Francesca Allhoff, *Graduate Program Coordinator*

Graduate Student Services Welcomes You to Washington University

Graduate Student Services offers support to all Engineering graduate and professional students from admission through graduation. We connect students with resources at WashU to help them achieve their academic goals, address personal concerns, and ensure they get the most out of their experience. We also support faculty and staff with administrative processes and policies related to graduate admissions, financial aid and graduate programs. Please feel free to stop by Lopata, 203, or contact us at 314-935-5830 or eng-gradstudserv@wustl.edu if you need help, or have questions.

Modifications Due to COVID-19 Pandemic

The COVID-19 pandemic, also known as the coronavirus pandemic, is an ongoing global pandemic of coronavirus disease 2019 (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) [https://en.wikipedia.org/wiki/COVID-19_pandemic]. There have been several modifications of procedures and access to the Washington University campus. For details of Washington University fall plan, please see <https://covid19.wustl.edu/washu-together-fall-plan/>

For students unable to come to campus in the fall semester, please see:

<https://engineering.wustl.edu/prospective-students/graduate-admissions/Pages/Fall-2020-Admitted-PhD-FAQs.aspx>

We note that students who cannot arrive on campus until January 2021 may delay their qualifying timeline by one semester; please consult your advisor.

1. Registration

The Department of Electrical & Systems Engineering offers four doctoral degrees: Doctor of Philosophy (PhD); Doctor of Science (DSc) in Electrical Engineering; and PhD and DSc in Systems Science and Mathematics. The Doctoral degrees are administered and granted by the McKelvey School of Engineering.

All Doctoral students are matriculated in the [McKelvey School of Engineering \[A\]](#) Registration takes place each semester on dates announced by the University. Detailed instructions for registration plus necessary materials are mailed directly to all graduate students enrolled during the previous semester.

All graduate students pursuing a degree in the department must register each semester until all degree requirements are completed. Historically, most PhD programs have been completed within five or six years. Students register in courses and/or research units until they have earned the total number of credits required for their degree. Doctoral students typically register for nine credits of courses and/or research each semester until 72 credits are completed; students may choose to spread out research. After earning the required number of credits and fulfilling the course degree requirements, the student requests registration from their advisor or the Graduate Program Coordinator for one of the following:

- *EGS 9000 Full-time Graduate Research/Study* - Full-time Graduate Research/Study indicates the student's full-time engagement in research or academic writing until graduation. Students are administratively registered in EGS 9000 based on recommendations from their advisors stating that the students are making satisfactory progress toward their degrees.
- *EGS 9001 Full-time Graduate Study in Absentia* - During a student's period of regular registration, they may have a need or opportunity to study away from Washington University. The McKelvey School of Engineering on a case-by-case basis in absentia will consider recommendations from departments for students' registration. Students must complete the *In Absentia* form. If approved by the McKelvey School of Engineering, these students will be registered for EGS 9001 Full-time Graduate Study in Absentia. Students may be allowed to register for EGS 9001 for up to four consecutive or non-consecutive fall/spring semesters. Semesters in which a student is registered in absentia are counted as part of the student's program length.

Full-time Doctoral students registered within the program and making satisfactory academic progress are eligible to receive a stipend, tuition remission, and the health insurance and wellness fee subsidies. Tuition each semester will be calculated based on the number of registered course units.

1.1 Categories of Registration

- *Active Status or Continuing Student Status*: A graduate student is viewed as having an active full-time status if enrolled in nine (9) or more units or a PhD student enrolled in either EGS 9000 or 9001. A DSc student enrolled in ENGR 884 (Doctoral Continuing Student Status) is considered to be enrolled with Continuing Student Status. A student is enrolled under active part-time status if enrolled in at least one, but fewer than nine (9) units. Graduate students must be authorized by their advisor prior to registration.
- *Inactive Status*: Students who have not completed their course requirements but who, because of personal reasons, must suspend their studies may request a leave of absence with the approval of their advisor, the Director of Graduate Studies and for Doctoral students the McKelvey School of Engineering. See the McKelvey School of Engineering website on leaves for further information. Doctor of Science students, who suspend their studies must register for ENGR 886 (Nonresident Doctoral Student Status). Students who fail to register in one of the

Previously mentioned categories will automatically have their graduate standing revoked. See the McKelvey School of Engineering Bulletin for further information.

Please note: Graduate students who do not register in one of the above categories will have to apply for reinstatement if they wish to re-enroll at a future time. For reinstatement information, masters and Doctoral students should contact [McKelvey Graduate Student Services](#) [B]. Students seeking reinstatement may be required to pay a reinstatement fee, take special reinstatement examinations, and repeat previous work if it fails to meet contemporary standards. Candidates for the DSc degree who apply for reinstatement may be required to repeat qualifying examinations.

2. Advising

2.1 Temporary Academic Advisor

Advising of incoming doctoral students is handled by the Doctoral Admissions Committee, which assigns an advisor for the selection of courses for the first semester.

2.2 Research Advisor

Each doctoral student is required to successfully advance to candidacy as discussed later in this document. At the successful conclusion of that process, a student has a research advisor who will serve as their academic advisor.

2.3 Changing Advisors

The advising relationship is established and continued only by the mutual consent of student and faculty member. If the advising relationship breaks down, then the department will work with the student and the advisor on a resolution.

3. Course Information

The normal load for full-time graduate students is nine (9) units per semester. The course selection and load must be worked out with and approved by the student's advisor. Graduate students with research and assistantship duties will typically enroll for course loads commensurate with the requirements of these duties. Students otherwise employed full-or part- time, on-or-off-campus, will determine a satisfactory reduced course load with their advisors. International students on student visas are required to maintain full-time enrollment status.

Given that communication skills are important for all doctoral students, as well as required to complete the Mentored Teaching Experience, advisors may request that students complete courses aimed at improving written and oral communication in English.

3.1 Academic Requirements

Students need 72 credits to obtain a doctorate from the ESE department. Credits come from three kinds of work: regular courses, seminars, and research credit. These 72 units must consist of at least 36 units of technical coursework approved by the research advisor and at least 24 units of research, and may include work done to satisfy the requirements of a master's degree in a related discipline.

3.2 Transfer Credit

A maximum of 24 units of graduate credit earned at institutions other than Washington University may be applied toward the Doctor of Philosophy degree and a maximum of 30 units for the Doctor of Science degree. Transfer credit must be recommended by the advisor, forwarded for approval by the ESE Graduate Committee, who then forward it for approval by the McKelvey School of Engineering.

No graduate courses carrying grades lower than B can be accepted for transfer toward any graduate degree, and no courses will be accepted toward degree requirements if the course exceeds the 10-year maximum period unless they have formal approval of the Engineering Graduate Board. To transfer PhD courses, please fill out the application for [PhD Transfer Credit Form \[1\]](#). It should be noted, that courses transferred in for inclusion in a doctoral degree are not automatically approved. For inclusion in a master's degree, please consult the master's handbook for that procedure.

4. Qualifying and Matching Process

The process for matching students with prospective research mentors and the academic qualifying process are synergistic, but follow separate paths. While synergistic, passing the qualifying exam is not contingent on a successful matching, and vice versa. Students must successfully complete both processes to be qualified for formal advancement to candidacy and the research phase of the doctoral degree. Differences between the DSc and PhD requirements will be noted.

4.1 Goals of the Matching Process

- To ensure that each student has an opportunity to perform rotation activities (i.e., engage in research activities in a significant and meaningful way) with at least one faculty member with whom they share research interests.
- Students are able to secure financial support from a faculty research mentor.
- For PhD students, to ensure that each student is able to secure financial support from a faculty member with, whom they share research interests by August 15th of the next academic year.
- For DSc students, to ensure that each student is able to secure a faculty research mentor.

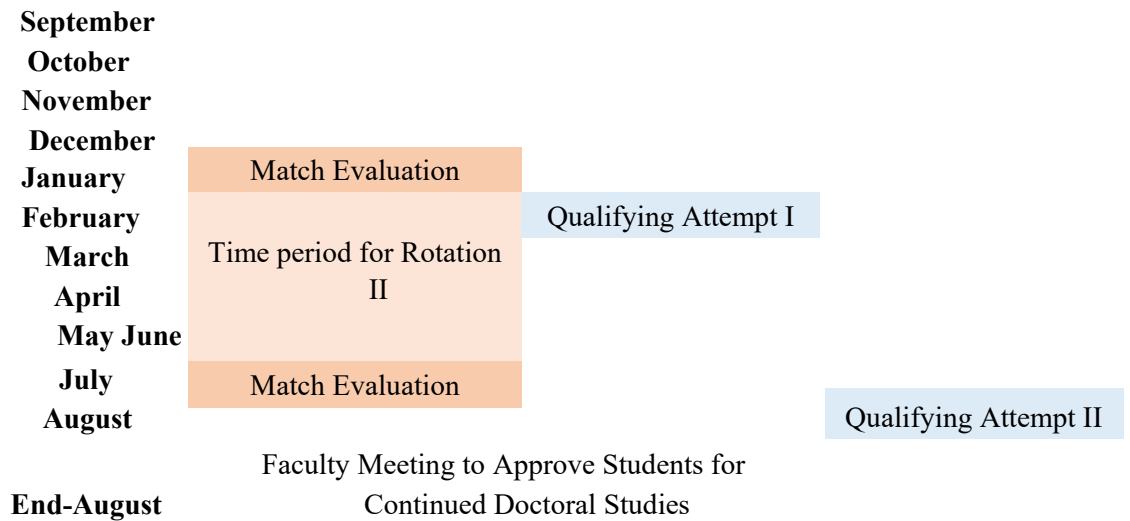
4.2 Goals of the Qualification Examination Process

- To evaluate the student in the following areas:
 - Communication skills, including English proficiency.
 - Ability to engage in academic discourse professionally.
 - Technical proficiency in pertinent ESE areas, at a level of depth appropriate for first-year doctoral student.
- To provide constructive feedback to the student on areas of proficiency and improvement. The feedback will include recommended remedies, such as supplementary coursework, immersive experiences for improving English proficiency, and improvement of oral presentation skills.
- To provide feedback to the potential faculty mentor on the above areas.
- To ensure a high and uniform quality of doctoral students in our department.

4.3 Timeline for Parallel Rotation and Qualifying Process

A timeline for PhD students to complete the process is provided below. DSc students should complete this process before they have finished 36 units of credit that will be applied toward their DSc degree.

(Rotation II and Qualifying Attempt II may not necessary as described below.)



- There are two rotation periods: Fall and Spring. If the first rotation results in a match, then there is no second rotation. If the first two rotation periods do not result in a match, then the student may arrange a third rotation to be completed by August 15 of the academic year in which they begin the Ph.D. program.
- The rotation mentor and research advisor must be a tenured or tenure-track faculty member in the department, or a member of the ESE affiliate faculty
- At the beginning of the rotation, students will need to complete and turn in their Lab Affiliation Form at the beginning of their first year. The purpose of this form is used to determine what research rotation is being worked on, as well as making the department aware of a confirmed match. At the end of the semester, you and your advisor will need to discuss whether you will be continuing your studies in the lab or not. If you are going to continue, please fill out the bottom portion and return this form to me, confirming that you have successfully matched. If not, you will need to complete another rotation and subsequent form at the end of said additional rotation
- The rotation mentor for the fall semester will be determined by the beginning of the fall semester, based on the admissions and matriculation processes, in consultation with the ESE Admissions Committee or its equivalent and the Department Chair.
- During the rotation, the student works closely with the mentor on tasks and research projects assigned by the mentor.
- At the end of the rotation, students will need to complete a research rotation report at the conclusion of each rotation.
- Doctoral students will complete the [Electrical & Systems Engineering Lab/Rotation Affiliation Form\[2\]](#) . This form will be used to determine what research rotation students are currently doing, as well as making the department aware of the rotation. At the end of the semester, students and their advisor will need to discuss whether the will be continuing their studies in the lab or not. If a match is going to continue, the bottom portion of the form will be returned to the Graduate Program Coordinator, confirming that the student has successfully matched. If a match was not made, students will need to complete another rotation and subsequent form at the end of said additional rotation.

- If unable to complete a match after the second rotation, the student will be on academic probation for 90 days. Student will be required to meet with committee chair and the Dir. of Graduate Studies. The student has a final opportunity to secure an advisor/funding doing a final, 90 day rotation. If unsuccessful candidate will be dismissed from the program at the end of the first year.
- When a student is a match after a rotation, the PI will begin financial support for the student at the beginning of the next semester.

4.4 Qualifying Process

- The first round of qualifying exams is scheduled for February; the second round, if necessary, is scheduled over the following summer.
- Each student is assigned a Qualifying Exam Committee of three tenured or tenure-track faculty members in the department. The committee is appointed by the ESE Graduate Admissions Committee, or its equivalent. The most recent rotation advisor will not be a member of the Qualifying Exam Committee. Students may suggest up to five ESE faculty for this Qualifying Exam Committee by January 17 (for summer exams, the students will be notified of the deadline); the ESE Graduate Admissions Committee may select other faculty members to serve.
- The qualifying exam consists of a private oral presentation approximately twenty minutes in length to the Qualifying Exam Committee, followed by questions from the committee.
- The topic of the oral presentation is pre-selected by the student, and the student must submit a proposed title and abstract to the Graduate Program Coordinator by January 17 (for summer exams, the students will be notified of the deadline).
- The presentation may cover rotation activities, in which case their report will be a research rotation report, or it may be on a separate area in ESE. If a separate area in ESE is chosen, then at least two or three academic papers are selected as the basis for the report and presentation, which will be a critical review.
- Typically, the report is a four-page self-written paper. This report or paper will be submitted to the Graduate Program Coordinator for ESE two weeks prior to the actual exam.
- Following examination, each member of the committee will assign a score based on a uniform rubric agreed to by the department, covering areas described in Section 4.2 above. In each of the three areas (communication skills, engagement in academic discourse, and technical proficiency), the committee will score the performance as:
 - Excellent
 - Very Good
 - Good
 - Fair
 - Poor
- The committee will determine the outcome of the exam immediately after the end of the exam. Outcomes of the exam are:
 - Unconditional pass; unsatisfactory performance; decision deferred to departmental faculty meeting.
 - The committee will provide constructive feedback to the student on areas of proficiency and improvement.
 - The student may consult with the ESE Admissions Committee, or its equivalent regarding any

concerns they have about the examination process.

- If performance is deemed unsatisfactory, the student may have a second attempt at the qualifying exam. The procedure for the second attempt mirrors that of the first attempt, with the following additions:
 - The second attempt must be completed at least a week before the August meeting of the faculty in the department.
 - If the second attempt is unsuccessful, the student is deemed to have failed the qualifying exam.

4.5 Advancing into Candidacy

- If a student has a successful match and passes the qualifying exam, then the faculty of the department vote on advancing the student to candidacy at a regularly scheduled meeting. Research mentors of students considered for candidacy will be invited to the faculty meeting.
- Students who fail to match or fail the qualifying exam will be discussed by the faculty at a meeting no later than the August following the first year of study; the faculty will vote whether to advance each student to candidacy. Research mentors of students considered for candidacy will be invited to the faculty meeting.

4.6 Research Rotation Reports

Within three weeks of the end of each rotation, the student will write and submit a document to the rotation mentor for approval. The report should be written in the form of a standard research article and it must include the following: a) student's name; b) title of report; c) semester/year of the rotation; d) rotation mentor's name; e) date of report; and f) proper citation of prior work. This document should be double-spaced. Most written reports are anticipated to be around 10 pages in length. The length may vary, but the quality should not. If the project has not been completed, preliminary or partial results are to be described. A typical report contains:

- Abstract
- Literature Review
- Objectives of Rotation
- Methods Used
- Results of Rotation
- Conclusions
- Recommended Next Steps

4.7 Expected Course Selection

- The PhD degree requires at least 36 units of courses, 24 units of research, and 72 units total.
- Most students will take two courses in the fall they enter graduate school, along with a three-unit rotation course (**ESE 601 – Research Rotation for ESE Doctoral Students**). This rotation course counts toward the course requirements for the degree.
- After a student has a successful match, then the courses in subsequent semesters are selected in consultation with the research advisor.
- If a student has a successful match, then a letter grade is awarded for the rotation. If a student does not have a successful match, then the student receives an incomplete as a grade for the rotation.
- If a student does not have a successful match in the first rotation, then typically this student would take two courses and a second three-unit rotation course in the second semester. This second rotation course would not count toward the course requirement for the PhD degree. These courses would be selected in consultation with the academic advisor.

- If a student has a successful match for the second rotation, then letter grades are awarded for both rotations. There will be no course or course credit associated with the optional third rotation.

5. Milestones

Each student's graduate career is marked by a series of milestones achieved on the way to a doctorate. At each milestone, students demonstrate certain skills and abilities critical to success in ESE research. The ESE faculty defined these milestones both as intermediate targets at which to aim and tools to assess your progress toward the doctorate.

Times are given in years relative to the beginning of the first semester as a graduate student at Washington University. While the guidelines are flexible, the time limits should be taken seriously. The following sections describe the procedures of each milestone in more detail.

There are two sets of requirements in this section. The first is the mentored teaching experience which is a teaching requirement. The second is a set of requirements related to research progress, ultimately leading to a dissertation and final defense.

5.1 Mentored Teaching Experience

After successfully completing the qualifying process, but before the dissertation defense, doctoral students must fulfill two mentored teaching experiences (MTEs) in ESE or otherwise approved courses. Students are required to have a mentored teaching experience for at least two semesters, documented by registering for **EGS 600 Mentored Teaching Experience**, and submitting the [ESE PhD Program Basic Teaching Requirement Fulfillment Form \[3\]](#) to the Graduate Program Coordinator.

Prior to the second year, doctoral students must take the ESE Communication Proficiency Exam. This exam is designed to assess students' readiness to complete an MTE successfully. Students who need additional training are required to sign up for the course E60 Presentation Skills for Scientists and Engineers, in the fall of the second year.

Doctoral students must complete the MTE orientation, and attend two approved workshops conducted by the [Teaching Center \[C\]](#) by the end of their third year of doctoral studies. Documentation of attendance by the Teaching Center will be used to verify this requirement. Working closely with the instructor in a course, students may fulfill the MTE requirement in many ways including:

Giving lectures in undergraduate classes

- Conducting recitation sessions in undergraduate classes
- Giving lectures in laboratory courses that introduce or interpret the experiments
- Conducting help sessions in which the graduate student explains the background and methodology of engineering approaches (involving a lesson plan)
- Holding office hours
- Grading assignments or exams

Doctoral students are also required to deliver a minimum of four oral presentations at journal clubs, seminar series, scientific conferences, or retreats. Presentations given as part of the MTE, lab meetings, or dissertation committee meetings will not satisfy this requirement. The student should document the fulfillment of this requirement and submit it to the dissertation research mentor for approval. The approved document should then be submitted to the Graduate Program Coordinator.

5.2 Ethical Conduct of Research

All doctoral students must complete training in the ethical conduct of research. Most students will complete PERCSS, the Program for the Ethical and Responsible Conduct of Science and Scholarship. This training is offered at least once per year. Details on the requirement will be communicated to each student. Any student seeking to fulfill this requirement in a different way must obtain approval in advance from the co-directors of the program.

In addition, all students in the program are strongly encouraged to engage in workshops, seminars, and training opportunities related to diversity, equity, and inclusion. Washington University offers many such opportunities, including those offered through the offices of Diversity, Equity and Inclusion in the McKelvey School of Engineering, <https://engineering.wustl.edu/about/diversity/index.html>[D] and in the School of Medicine <https://diversity.med.wustl.edu/>[E]

5.3 Qualifying Exam, Matching Process, and Preliminary Research Review

The qualifying and matching process is described in detail in Section 4; these milestones are completed in year one.

There is a preliminary research review after year two, which should be completed by June 30 for students entering in a fall semester. The research advisor selects three ESE faculty members to participate as a committee. The student presents research progress to date; the anticipated length of this presentation is around 20 minutes. Note that this is not a proposal, but a progress report. After the presentation, the student answers questions and engages in academic discourse.

After the preliminary research review, the committee provides feedback to the student, the advisor, and the ESE graduate committee on:

- oral and written (as reflected in presentation slides) communication skills;
- ability to engage in academic discourse (understand and answer questions);
- research progress and ability to engage within the research project structure;

5.4 Dissertation Committee Approval

Each Doctoral student has a Dissertation Committee approved by the Director of Graduate Studies that is chaired by the dissertation research mentor; this committee is typically proposed jointly by the student and the mentor. The dissertation subject must be approved by the Dissertation Committee. This approval is obtained by successfully passing the dissertation proposal. The Committee monitors the dissertation via a successful dissertation defense. The Dissertation Committee must follow all guidelines of the McKelvey School of Engineering and consists of five members (the dissertation research mentor plus four other members) with the following requirements:

- 5.2.1 Three (3) ESE primary faculty - or affiliated faculty (least one must be a primary ESE faculty member).
- 5.2.2 One (1) faculty member (or scholar in private sector or government) without primary or affiliate appointment in the ESE department.
- 5.2.3 Four (4) of the five (5) members must be tenured or tenured-track faculty at Washington University.

5.5 Dissertation Proposal

The dissertation proposal should be completed by the end of the third year. The proposal and presentation will include a thorough survey of the field, a discussion of those areas in need of further research and a tentative but clear definition of the problem on which the student intends to focus the dissertation. The student must present a written proposal to the committee at least two weeks in advance of the exam.

The format of the exam is as follows. The student should obtain a copy of the [Dissertation Proposal Form](#) [4]

from the Graduate Program Coordinator prior to the exam. The student should present the proposed research for approximately 30 minutes. Following the presentation, the committee examines the student on understanding of the foundation of the particular field of research and evaluates the scope and merit of the proposed research. With the student in a waiting room, the Dissertation Committee votes on the outcome of the exam and completes the exam form, following which the committee meets with the student and the advisor.

5.6 Title, Scope, and Procedure

Once Doctoral students pass their proposal defense, students should submit their [Title, Scope and Procedure Form](#) [5] to the McKelvey School of Engineering as soon as possible. This form briefly describes the planned work of the dissertation. The “Scope” portion of the dissertation indicates the specific area of study and the questions to be answered, while the “Procedure” briefly describes how the student carries out their work. The Title, Scope and Procedure Form must be registered with the McKelvey School of Engineering at least six months before the dissertation examination, or by the end of the fourth year, whichever comes first.

5.7 Annual Review of Student Progress

The student meets with the Dissertation Committee annually after the research proposal until the final defense; at least 4 members of the committee should attend. The student presents for approximately 15 minutes, highlighting progress and publications from the past year. The committee asks questions for approximately 30 minutes, focusing on progress, research direction, and potential areas of concern. Following the review, the Dissertation Committee provides feedback to the advisor and the student, with a copy to the Graduate Program Coordinator, who then provides copies to the ESE Graduate Committee. If there are concerns about the progress, then the report should discuss these concerns in detail. This report becomes part of the student’s record within the department.

5.8 Final Defense

Upon completion of the dissertation, the doctoral candidate must work with the Graduate Program Coordinator to schedule the defense at least two weeks in advance. Students need to complete a Dissertation Defense Committee Form, prior to the defense and be turned in to the Graduate Program Coordinator. The candidate presents the dissertation in a public forum and successfully defends the dissertation before a Committee consisting of the approved Dissertation Committee plus additional faculty as required. The dissertation must be approved by the completion of the [Final Examination Approval Form](#) [6] to the Graduate Program Coordinator after their defense.

5.9 Submission and Printing of Dissertations

Candidates must submit their dissertations electronically to [Washington University Open Scholarship](#) [F]. Students are given the option of ordering bound copies of their dissertations through [Thesis-On-Demand](#) [G]. Electrical & Systems Engineering will cover the cost for the student, advisor, and department. Students should reach out to the Graduate Program Coordinator for assistance.

6. Policies

6.1 McKelvey School of Engineering Policy on Probation and Dismissal

The McKelvey School of Engineering Policy on Probation and Dismissal for Academic Reasons was approved April 24, 2014 by the Graduate Council and is embodied in the following Electrical & Systems Engineering Department plan. All students in departmental doctoral programs are expected to satisfy the academic performance requirements of the McKelvey School of Engineering, as described in The McKelvey School of Engineering Bulletin’s General Requirements section. Electrical & Systems Engineering Department GPA Requirements All doctoral students in Electrical & Systems Engineering must maintain a GPA of 3.0 or higher, and register for ESE590 for all semesters of full-time status.

6.2 Dissertation Committee

If a student's progress is deemed unsatisfactory by the Dissertation Committee, the Committee may meet more frequently with the student and require continuing progress reports, to be shared with the Director of Graduate Studies. The Committee will work with the student to develop and implement an improvement plan, which for example, may include recommended coursework and/or additional training in research techniques or strategies, as well as a timeline for improvements and consequences (including possible termination from the PhD program). In unusual cases where the Committee repeatedly judges the progress unsatisfactory, the Committee in consultation with the Director of Graduate Studies may recommend probation or dismissal.

6.3 Department Procedures for Probation and Dismissal

To manage decisions regarding probation and dismissal, academic performance of all doctoral students is reviewed by the Doctoral Progress Assessment Committee (DPAC), which the department has designated to manage decisions regarding placement on probation, removal from probation, recommendations for dismissal after a probationary period, and recommendations for immediate dismissal due to extreme underperformance.

The DPAC is chaired by the Director of Graduate Studies. All decisions are made in accordance with the McKelvey School of Engineering's Policy on Probation and Dismissal for Academic Reasons. Normally, a probationary period would be no less than three months and, where probation criteria involve coursework, the probationary period will normally consist of one semester.

The student will be notified in writing of the decision, including an explanation of academic performance issues leading to probation or immediate dismissal and, if applicable, any requirements for what must be done within a specified period of time during the probationary period in order for the student to return to good standing. The written probation letter should generally be accompanied by the opportunity for the student to meet with the Director of Graduate Studies or designated departmental faculty representatives for clarifying discussion(s), and copied to the vice dean for graduate research and education in the McKelvey School.

All students on probationary status will be reviewed by the DPAC at the conclusion of the probationary period to determine whether the student should be (a) removed from probation and returned to good standing; (b) continued on probation; or (c) dismissed from the program. The student will be notified of the DPAC decision in writing.

If a student is dismissed from the program, the student will be notified in writing and will have the opportunity to appeal such dismissal in accordance with the McKelvey School of Engineering on Probation and Dismissal for Doctoral students.

6.4 Seminars

Each year the department sponsors or participates in a series of seminars by visiting lecturers and WashU faculty and students. All fulltime graduate students are required to enroll in **ESE 590- Graduate Seminar**, which is a pass/fail course carrying zero (0) units.

6.5 Research Assistantships

Research assistantships generally provide a stipend and some tuition from government or industry grants and contracts. They are awarded to students who have advanced to candidacy and made a commitment to a particular research area and who, by virtue of their academic background and record, satisfy a particular project's needs.

Research assistantships may be supplemented by tuition scholarships that may be funded jointly by the McKelvey School of Engineering and the School of Medicine. Research assistants are responsible to the project director (principal investigator) of the project. (Generally, this same individual eventually assumes the additional role of dissertation or dissertation mentor.)

6.6 Master's Degrees

Doctoral students may find that they meet the requirements for a master's degree as they complete their studies. Those who wish to obtain a master's degree must first discuss this with their research advisor and obtain their approval to add the master's degree to their program of study. Once they have the approval of their research advisor, they should contact the Director for the master's program in which they plan to pursue the degree, and ask for formal admission to the program. Doctoral students should note that transferring courses into a master's program is done on a course-by-course basis, and should consult the master's handbook for that procedure.

6.7 Outside Employment

Holders of fellowships, traineeships and assistantships are required to devote their 100% effort to graduate studies. They are not permitted to engage in any outside employment without special permission of the Director of Graduate Studies and the ESE Department Chair.

6.8 External Professional Activity for Full-Time Doctoral Students in McKelvey Engineering School of Engineering

Students and faculty must follow the guidelines developed by the university's [Conflict of Interest Review Committee \(CIRC\)](#) [H].

6.9 Time Off

Graduate students receiving awards are expected to commit themselves fully to their studies and research regardless of whether classes are in session. Intersession periods listed in the University Academic Calendar note times when classes are not in session. Graduate students in residence should, however, utilize these periods to further their studies and research. Intersession periods are not time off for graduate students receiving a stipend and students are expected to work full time on research during these periods.

Students on full stipend are permitted to take a maximum of two weeks of vacation during the calendar year and are expected to communicate the timing of that vacation with their research advisor. In addition, students are permitted to take the university scheduled holidays. Additional time off can be arranged but must be approved ahead of time by the research mentor (once selected) or the Director of Graduate Studies (before the selection of a research mentor). Absences of research assistants must be scheduled so as not to impede the progress of an ongoing research project and should be cleared with the research mentor.

6.10 Administrative Support

Department staff will help students with payroll, their purchases, keys and allocation of space issues. They do not generally provide clerical services to graduate students except in connection with scheduled courses and sponsored research projects.

6.11 Copying Service

Graduate students may not charge copying coursework to the department or a research project without prior authorization. Requests for copying service are normally channeled through the department staff, who are instructed to verify authorization with the department chair

7. Faculty and Staff



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9. Appendix I. Forms

[1] Transfer Credit Form

[DocuSign](#)

[2] Electrical & Systems Engineering Lab/Rotation Affiliation Form

[DocuSign](#)

[3] ESE PhD Program Basic Teaching Requirement Fulfillment Form

[DocuSign](#)

[4] Dissertation Defense Committee Form

[DocuSign](#)

[5] Title, Scope, and Procedure Form

[DocuSign](#)

[6] Final Examination Approval Form

[DocuSign](#)

10. Appendix II. Websites

[A] McKelvey School of Engineering

<https://engineering.wustl.edu/>

[B] McKelvey Graduate Student Services

<https://engineering.wustl.edu/current-students/graduate-student-services/Pages/default.aspx>

[C] Teaching Center

<http://teachingcenter.wustl.edu/>

[D] Office of Diversity, Equality, and Inclusion in McKelvey Engineering

<https://engineering.wustl.edu/about/diversity/index.html>

[E] School of Medicine Office of Diversity, Equity, and Inclusion

<https://diversity.med.wustl.edu/>

[F] Washington University Open Scholarship

<https://openscholarship.wustl.edu>

[G] Thesis-On-Demand

<http://wustl.thesisondemand.com/ordersystem/index.php?uri=/orderform/orderform/&page=1>

[H] Conflict of Interest Review Committee (CIRC)

<https://research.wustl.edu/offices/danforth-conflicts-interest-review-Committee/>