

ECE Doctoral Qualifying Process

The PhD qualifying process consists of completion of a first-year research project and oral examination. The project is intended to demonstrate the student's ability to assemble and analyze the relevant literature for a given research problem and to make preliminary steps towards his/her own contribution. Selection of an appropriate first-year research topic should be made with the approval of the student's advisor. The intent is to assess the student's preparation and potential for graduate level research work in their chosen field.

Essentially, there are three steps to completing the qualifying process:

- ✓ **Submit the Qualifying Exam Form**
- ✓ **Receive approval for coursework, including breadth courses**
- ✓ **Complete the Qualifying Exam**

Qualifying Process Timeline

Timelines MUST be observed and followed. The qualifying process will not be completed if the timelines are not met.

Qualifying Exam Form	<p>Completed within 13 months after matriculation Your "Matriculation date" is the date of the first day of classes in your first semester at Duke</p> <p>Discuss your committee with your advisor within your first year of study, then ask them to be on your exam committee</p> <p>Submit the form AT LEAST 4 weeks before the scheduled exam date</p>
Coursework and Breadth Requirement	<p>Courses chosen and approved by advisor, second faculty member, and DGS prior to Qualifying Exam Submit a complete (except grades of courses not yet taken) PhD Program of Study prior to or at the time of qualifying form submission. Courses <u>do not need to be completed</u> prior to the exam.</p>
Qualifying Research and Exam	<p>Passed within 14 months after matriculation Submit the written document to your committee AT LEAST 2 weeks before scheduled exam date</p>

✓ Submit Qualifying Exam Form

to establish your committee for the qualifying exam and to show which courses you have taken thus far must be completed **no later than 13 months after matriculation**

Download the form

Find the form at **Sakai→Resources→PhD Program Information and Resources→Qualifying Process and Exam→Qualifying Exam Form**

Create your committee

Students should discuss the qualifying exam committee with their advisor before approaching the faculty to serve on the qualifying exam committee

Your committee will be the group of 4 faculty members that conducts your qualifying exam, and it must include

- your advisor
- two ECE graduate faculty members in your primary curricular area
 - See the ECE Graduate Faculty list to ascertain which faculty are in which curricular area (<http://www.ee.duke.edu/research>)
 - For the purposes of these assignments, the faculty member's primary or secondary group affiliation can apply
- one ECE graduate faculty member outside your primary curricular area
 - Care should be taken in selecting the outside member so that the outside member has some knowledge pertaining to the research topic, but is far enough outside your main research area as to bring a different perspective on the research topic

Complete the form

List each course you've taken so far

- There is no expectation that you have completed all of your coursework—the faculty just need to know which courses you have taken so that they can ask appropriate questions during the exam

List your committee

- The DGS will determine which faculty member from your curricular area will serve as the chair of your committee

Provide your exam details

- **Date**
 - Identify a mutually convenient date and time for all of your committee members
 - Be aware that faculty travel schedules can limit the availability of exam dates and times. It is wise to schedule exams very early to ensure faculty participation
 - Keep in mind that the exam must be scheduled and the form turned in 4 weeks before the exam, so to be safe, try to start forming your committee and exploring possible dates at least 2 months before your target date—if you must complete your Qual by the middle of October, you should be thinking about your committee at least by August
- **Time**
 - Schedule 2 hours for the exam
- **Location**
 - Use 25 Live or contact the DGSA or ECE Staff Assistant for assistance with scheduling a location
 - Make sure that your room arrangement includes necessary technology for your planned presentation, and contact Pratt IT (help@pratt.duke.edu) if you need assistance
- **Title**
 - Provide a working title for your research, and remember to tell the DGSA if it changes before your exam

Submit the form

Submit the form as soon as possible—the earlier the better! At a minimum, you must submit it **FOUR weeks prior to your oral exam**

- Once you have completed the form and obtained your advisor's signature
 - Scan the form and submit it to the ECE Graduate Program Sakai Drop Box OR
 - Hand deliver the form to the DGSA in 110 Hudson Hall OR
 - Leave the form in the DGSA's mailbox in the ECE main office, 130 Hudson Hall
- The DGSA will obtain the DGS signature and send you a copy of the completed form

✓ Complete the Qualifying Research and Exam

a piece of *independent* work intended to assess your potential for Ph.D.-level independent research consisting of 2 components:

- A written document describing your research project and your work
- An oral presentation (research exam) of your project and your work

Complete your research

Both the oral and written components should include 2 parts:

- **A literature review**
 - Describe the background research in the field of interest
 - Put your work in the context of the larger research field – identify the questions that remain that you will address in your work
- **A description of your research (your work and results)**
 - Present and describe your approach to the problem
 - Present and describe your results to date
 - Tie your results back to the existing body of knowledge

Prepare your written document

Quantity

- 10 pages of literature review
- 10 pages of description of your work and results
 - Title page, table of contents, and references are not included in the page count
 - Generally, you should have at least 7.5 pages of text for both the literature review and your own work and no more than 5 pages of figures

Format

- 12 point font
- 1 inch margins
- 1½ line spacing

Submit the written document to your committee **AT LEAST 2 WEEKS** before your scheduled exam date

- If you email the document to your committee, request an acknowledgement of receipt

<p>Prepare your oral presentation (research exam)</p>	<ul style="list-style-type: none"> • 15 minutes of background and literature review • 15 minute presentation of your research
<p>Take the exam</p>	<p>Bring to the exam</p> <ul style="list-style-type: none"> • Your ECE PhD Qualifying Exam Form • Your ECE PhD Qualifying Exam Outcome Form • A PhD Qualifying Exam Evaluation Rubric for each member of your committee <p>Exam format</p> <ul style="list-style-type: none"> • The DGSA will send a reminder of the exam to the student and exam committee a week before and the day before the exam • The exam is closed to the public • Questions from the faculty qualifying exam committee to the students should emphasize the research topic, research topic background, and classes pertinent to the research topic background • The advisor will be a silent observer during the qualifying exam. The advisor will not ask or clarify questions for the student during the examination; the advisor may offer input during the decision/voting process after the student has left the room <p>Exam components</p> <p>Oral presentation of the written document, about 30 minutes (without interruptions for questions)</p> <ul style="list-style-type: none"> • 15 minutes for background/literature review • 15 minutes for your research <p>Faculty ask questions</p> <ul style="list-style-type: none"> • 30 minutes on your research work, its context, and relevant literature • 30 minutes to assess the student’s general preparation to undertake work in the chosen sub-discipline, mindful of the graduate classes already taken, research directions pursued to date, and any specific tentative plans the student may have for future research

	<p>After the exam</p> <ul style="list-style-type: none"> the student leaves the room, and the faculty discuss the student’s performance <p>Possible Outcomes</p> <ul style="list-style-type: none"> Pass: the student is qualified to begin work towards the preliminary exam Pass with required coursework or actions: the student is qualified to begin work towards a preliminary exam but certain courses must be taken or other scholarly actions must be completed Fail with required coursework or actions: the student has done well enough on the research portion of the exam to pass but is lacking in background knowledge; the student must complete the required coursework prior to retaking the qualifying exam Fail: <ul style="list-style-type: none"> Any student failing the qualifying exam on the initial attempt will have one additional attempt at the end of the semester immediately following If a student fails the exam on both attempts, he or she will be asked to exit the ECE PhD program <p>Submit the Qualifying Exam Outcome Report</p> <p>Faculty should sign the Qualifying Exam Report form and complete the rubrics, and the student’s advisor should return these forms to the DGSA in Hudson 110 or the DGSA’s mailbox in Hudson 130</p>
<p>Independent research expectations and assistance opportunities</p>	<p>The written qualifying exam document and oral qualifying exam should be prepared entirely by the student</p> <ul style="list-style-type: none"> Although you are free to discuss your project with your advisor, other members of your research group, or anyone else, your written document and presentation must be prepared independently You are encouraged to practice your presentation before an audience of your peers with feedback limited to presentational, not technical, support and focused on where revisions are necessary, not how to fix the issues <p>Students are strongly encouraged to take advantage of non-technical language and grammar assistance offered</p> <ul style="list-style-type: none"> Thomson Writing Studio (http://twp.duke.edu/writing-studio/appointments) <ul style="list-style-type: none"> International graduate students can make appointments ahead of time Graduate students whose native language is English must wait until the day-of to make an appointment (so

plan to go early!)

- EIS Writing Studio and Oral Skills coaching (<http://gradschool.duke.edu/academics/english-international-students/other-eis-services>)
 - International students only

