

## PhD Qualifying Exam Requirements (Old Format QE)

### Valid through Summer 2019 Procedure and Guidelines

The PhD Qualifying Examination consists of completion of a first-year research project with a written report and oral presentation. 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 project may be started at any time after matriculation. Completion of the project must be accompanied by a written report of approximately 20 pages in length, roughly half of which reviews the field (with appropriate references) and half of which describes the student's own progress to date. Both the report and the oral presentation are expected to be predominantly the student's own work (without extensive editing assistance, for example), although students are encouraged to practice their presentation before a technical audience of their peers. The written project report must be completed and submitted to the examination committee at least fourteen (14) calendar days prior to the date of the oral examination. The oral examination will normally be held before the 14th month from matriculation.

The examination committee will consist of four ECE faculty members, including the student's advisor. The three other members of the exam committee will be nominated by the student and approved by the student's advisor and the Director of Graduate Studies. All committee members must be on the faculty of the Graduate School. Normally, two faculty members will be from the student's curricular group and one will be from a different curricular group. For the purposes of these assignments, either a faculty member's primary or secondary group affiliation will apply. The exam details should be submitted to the DGS for approval via the Qualifying Exam Form at least 4 weeks prior to the exam date.

The oral exam will consist of a 30-minute presentation by the student of his/her research project followed by up to 30 minutes of questions about the work, its context, and relevant literature. In addition, as part of the oral exam, the committee will also question the student to assess general preparation to undertake work in the chosen sub-discipline for a minimum of 30 minutes. The examiners will be mindful of graduate courses already taken, research directions pursued to date, and any specific tentative plans the student may have for future research. The entire oral exam will be limited to 90 minutes. The intent is to assess the student's preparation and potential for graduate level research work in his/her chosen field.

The possible outcomes of the first year exam are "Pass" – the student is qualified to begin work towards the preliminary exam; "Partial Pass" – the student is qualified to begin work towards a preliminary exam but additional coursework or actions are required; and "Fail." A "Pass" or "Partial Pass" outcome requires at least three affirmative votes. Any student failing the qualifying exam on the initial attempt will have one additional attempt by the end of the semester immediately following. Failure of the exam on the second attempt will disqualify the student from further doctoral studies in the Duke ECE program.