

Supplemental information for the Doctor of Philosophy (Ph.D.) program in the Department of Electrical and Computer Engineering

This document describes additional information regulations and information relating to the Ph.D. degree in the Department of Electrical and Computer Engineering (ECE). For details on the ECE graduate programs, refer to [Clarkson University's catalog](#) for the Graduate Programs.

Ph.D. Research Committee

Each Ph.D. degree student must have a research committee of at least 5 committee members. The student's research advisor acts as the committee chair. At least 3 members must hold primary appointments at the rank of Assistant Professor or higher in the ECE Department, and at least 1 member must be a Clarkson faculty member from outside the ECE Department. Off-campus students may have a co-advisor, who holds a Ph.D. in a relevant area, at the student's place of employment. The co-advisor can serve as the fifth member of the committee. On the recommendation of the faculty advisor, the ECE Graduate Committee, with the approval of the Graduate School, will appoint the Research Committee. The research committee must be appointed before the Ph.D. comprehensive exam (see below) and is responsible for ensuring that the student has sufficient preparation appropriate for the degree.

The research committee will:

- a. Serve as the members of the Ph.D. comprehensive exam
- b. Serve as the members of the dissertation proposal defense committee
- c. Serve as the final dissertation committee.

The student's committee has the responsibility to certify that the major field, minor field, and overall coursework is appropriate to the student's field of study. This must be done by the time of the approval of the student's research proposal.

Ph.D. Comprehensive Examination

All students must pass a comprehensive examination within one year of entering the Ph.D. program or after the completion of 30 graduate credits, whichever comes later.

- The comprehensive examination will provide students with an opportunity to demonstrate familiarity with their field of specialization required for the Ph.D. study and their critical thinking skills.
- The comprehensive examination will consist of a written research paper and an oral presentation of the research. The research paper must include a comprehensive and pertinent literature review and a broad overview of possible research topics. The student should demonstrate an ability to
 - Identify a number of relevant research papers,
 - Grasp key ideas in the papers, and
 - Replicate important results (derivation of equations, developing computer models, etc.).

- The research committee will be responsible for organizing and administering the comprehensive examination.
- At the conclusion of the comprehensive exam, the research committee renders one of the following decisions:
 - i. Pass
 - ii. Fail

The research committee must inform the Graduate Committee chair, in writing, of the results of the comprehensive exam, by completing and submitting the ECE comprehensive Exam results form.

In case of a fail, the student will have a second opportunity to take the examination within six months of the first attempt.

If the student does not complete the comprehensive exam requirements within the time limits specified, the student will be required to withdraw from the program. In this case, the student can be granted the option of pursuing a Master of Science degree.

If a student does not wish to take the exam according to the above schedule but wishes to continue in the program, the student must petition the Graduate Committee for permission to take the exam at a later date. Petitions must be received well in advance of the required exam date. There is no guarantee that the Graduate Committee will approve such requests.

Students completing a Master of Science degree in the Department of ECE at Clarkson University can combine the MS oral defense with the comprehensive exam.

Transfer of credits

Within one year of entering the Ph.D. program, any transfer of credits from other institutions must be completed, including the transfer of credits resulting from a Master's degree program. Any coursework must be noted as major, minor, or out of the department, as appropriate.

Candidacy Examination

All students must satisfactorily complete the Ph.D. candidacy procedure by defending a Ph.D. research proposal within six months after the successful completion of the comprehensive examination or two years after entering the Ph.D. Program, whichever comes later. Part-time students should complete the candidacy exam before completing 66 credits. Students will have two opportunities to get approval from the research committee.

The research proposal is intended to demonstrate the student's research topic is suitable for the successful completion of dissertation research, and that there is a reasonable likelihood that the student can successfully complete the research. The research proposal is a written document which is examined by the committee and orally defended in front of the committee. At the conclusion of the oral exam, the committee will determine the exam results, either

- i. Pass
- ii. Fail

The committee will inform the ECE Dept. Chair, in writing, of the results of the exam. A copy of this memo will be inserted into the student's file.

In the event that this exam is failed, the student will be required to withdraw from the program. In this case, the student can be granted the option of pursuing a Master's of Science degree.

If subsequent to passing the candidacy examination, the student or the thesis advisor decide to make a significant change in the research topic, the research committee should be informed in writing.

Exceptions to the departmental requirements must be approved by the Department's graduate committee and the department chair. This approval must be in writing and inserted into the student's file.