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

This document describes additional information regulations and information relating to the PhD 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. Comprehensive Examination

All students must pass a comprehensive examination within one year after entering the PhD program; they will have two opportunities to pass.

- The comprehensive examination will provide students with an opportunity to demonstrate depth and breadth of knowledge in their field of specialization covered in any reasonable undergraduate program. The goal is to construct an examination which will not require extensive study time. The scope of the examination will be limited to undergraduate material and thus students should be prepared for it at the start of their graduate program. The graduate committee will be responsible for organizing and administering the comprehensive examination. The overall structure of the comprehensive examination is described as follows:
  - All PhD Students are required to take the exam during the first semester. The examination will be administered between the 4th and 6th week of the semester. A student who fails the exam the first time must retake the examination during the following semester.
  - The examination consists of a written portion and an oral portion. Each PhD student will take the examination in four ECE undergraduate core areas and one undergraduate mathematics elective area. The areas will be selected by the candidate from a list maintained by the Department. Students are expected to consult their adviser before selecting the examination areas. The students are also responsible for making appointments with the examiners and face a brief one-on-one oral comprehensive examination within two weeks of the written test.

- The student must demonstrate proficiency in a minimum of three out of these five areas.
- At the conclusion of the comprehensive exam, the committee renders one of the following decisions:
  i. Pass
  ii. Conditional Pass
  iii. Fail

The committee must inform the ECE Department chair, in writing, of the results of the comprehensive exam. Any conditions must be spelled out in this memo, a copy of which will be placed in the student’s file. In the case of a conditional pass, the student will be considered to have passed the comprehensive exam when the conditions have been satisfied. When the conditions include specified additional coursework, the student will be allowed to fulfill this requirement beyond the one year time limit, by taking the specified class the next time that it is
offered. The student must notify the department when the conditions have been met.

The exam will be administered in a 4 hour, closed book format. A List of core areas within the ECE Department and the Mathematics elective will be maintained by the department.

- When deemed necessary, the graduate committee and the department chair can administer an alternate format for this examination.

Transfer of credits

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

PhD Research Committee

Each PhD degree student must have a research committee of at least 5 Clarkson faculty members at the rank of Assistant Professor or higher. At least 3 members must hold primary appointments in the ECE Department, and at least 1 member must be from outside the ECE Department.

This committee will be appointed within the first year of a PhD student’s entry into the program, and is responsible for ensuring that the student has sufficient fundamental preparation appropriate for the degree. The student’s research advisor acts as the committee chair. The student is responsible for informing the ECE Dept. of the committee members.

The research committee will:

a. Serve as the members of the dissertation proposal defense committee
b. 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.

Candidacy Examination

All students must satisfactorily complete the PhD candidacy procedure by defending a PhD research proposal within two years after the entering the PhD Program. 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. Conditional Pass
iii. 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 in the student’s file. Any conditions must be spelled out in this memo, along with a time limit for their completion. The proposal will be considered passed when these conditions have been fulfilled. The student, in writing, must notify the department when these conditions have been met. This must be done within the specified time limit. If the conditions are not met within this time limit, the student will be considered to have failed the proposal. In the event that this exam is failed, the student will be terminated from the program. In this case, the student can be granted the option of pursuing a Master’s of Science degree.

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.