

ECE Comprehensive Examination for Ph.D. Program

The main purpose of the PhD comprehensive examination is to:

1. Assess the suitability of the candidate for graduate work at the doctoral level,
2. Identify areas of weakness (if any) of the candidate in his/her discipline and field of specialization,
3. Evaluate the scope of the proposed research for suitability and feasibility.

The exam will focus primarily on (1) the research topic and related background knowledge, and (2) the research proposal.

Failure to pass the examination may result in a requirement to withdraw from the program. The exam may have one of three outcomes: (a) Pass without condition, (b) Pass with conditions (to be satisfied for continued registration), or (c) Fail.

A student who fails the first attempt at the comprehensive examination may be required to withdraw or may be granted permission to attempt the examination again within a period of three months. A student who has passed with conditions but fails to satisfy the conditions shall be required to withdraw.

Completion Timeline:

- Students are required to attempt their comprehensive exam by the end of their 4th term since the first registration in the Ph.D. program.
- Student who are granted permission to re-attempt the examination must pass the comprehensive exam successfully (with no conditions) before the end of the 5th term of the Ph.D. study.
- Course work must be completed before the comprehensive exam, otherwise special approval required from the Associate Chair (Graduate).

Direct Entry Ph.D.

In the case of Direct Entry PhD, the comprehensive exam must take place by the 6th term of enrollment.

MESc to PhD Transfers

In the case of a transfer from the MESc to PhD program, the PhD Comprehensive Examination must take place by the 6th term of initial registration in the MESc program.

Failure to Complete the Comprehensive Exam

If the comprehensive exam is not completed before the end of 5th term, the student's academic record will be sealed. The student's PhD advisory committee shall meet and submit a report to the graduate committee during the first two weeks of the 6th term. The student's file will be discussed at the graduate committee. The graduate committee may request to withdraw the student from the program. The examination committee should be proposed by the student's advisor at least three weeks before the date of the oral examination. The advisor in consultation with the examination committee will specify at least two subject areas related to the fundamental

aspects of the proposed research. These subject areas must be included in the PhD comprehensive examination submission form.

Comprehensive Exam Research Proposal Document

The student is required to submit a written proposal of his/her PhD research to the ECE graduate office and to the PhD comprehensive examination committee members at least 10 days before the examination date. The research proposal must include the following sections/information (but not limited):

1. **Literature Review:** Discuss the literature relevant to the proposal, placing the proposed research in the context of the latest development in the field of research. Strengths and weaknesses of previous research must be emphasized.
2. **Discussion/Methodology:** The student must describe the methods/proposed approaches and research tools that the student will be using in his/her research. Sufficient details must be provided to allow the committee members to assess the feasibility of the proposed research. Any progress or findings made to date must be included.
3. **Proposal:** Summary of the proposed research and timetable describing the research milestones/deliverables with expected start and end dates.
4. **Significance:** A statement that highlights the anticipated significance of the proposed research

The research proposal document must be limited to **20 pages** (including figures, tables, and references), double-spaced. The report should be formatted with 1.5 line spacing and a 12pt font.

The oral presentation at the beginning of the exam is limited to **30 minutes**.

Exam Committee

A Ph.D. comprehensive examination committee shall normally consist of at least three members of the Faculty of Graduate Studies (at least 1 of whom should not be from the advisory committee and at least 1 who should be a regular ECE member) and a chair appointed by the graduate coordinator. The membership of the examining committee shall be formed at least 3 weeks before the proposed examination date and approved approval by the associate chair (Graduate), who will ensure that each committee has sufficient members who are knowledgeable of the subject area of the student's research project. The chief advisor may be a member of the examining committee but not the chair.

The results of the examination shall be submitted to the Graduate Coordinator.