

ELG 9998 Ph.D. Comprehensive Examination

University/Faculty regulations

<https://www.uottawa.ca/faculty-engineering/leadership-governance/academic-regulations>

“G1.1 Comprehensive exam: For PhD programs featuring a comprehensive exam, all components of the comprehensive exam including any oral defence must be completed within six terms of first enrolment in the program. Failure to complete within six terms will result in a first failure of the comprehensive exam. Students must enrol for the comprehensive exam and complete it in their seventh term. Failure to pass by the end of the seventh term will result in a second failure and automatic withdrawal from the PhD program.

Completing all components of the comprehensive exam within three terms of first enrolment in the program is considered good progress.”

Objective

The purpose of the comprehensive examination is to determine if the candidate has a sufficiently strong background in their research field and in related areas of fundamental engineering principles to conduct PhD level work. The comprehensive will focus primarily on the student’s research field and related areas of knowledge. Questions in the comprehensive exam should test fundamental principles and knowledge in the undergraduate fields related to the candidate’s field of research, and can also include knowledge gained from relevant graduate courses and from the candidate’s early preparation for their thesis work. In keeping with the idea of a “comprehensive” exam, it should be fairly broadly based, and not concentrate exclusively on knowledge directly related to the thesis topic.

Pre-requisites

Every PhD student shall have completed the graduate courses required as part of their PhD program before taking the PhD comprehensive exam.

Possible verdicts

The possible results for the PhD comprehensive exam are as follows:

- a) Pass, or
- b) Pass, with some additional remedial requirements,
- c) Failure, with permission to repeat the comprehensive examination once more, within 6 months, or
- d) Failure and mandatory withdrawal from the PhD program.

No student may present himself/herself for the comprehensive examination more than twice.

Additional information and procedure

An advisory committee of faculty members is set-up for the PhD comprehensive exam. The advisory committee must include at least two faculty members who are not supervisor/co-supervisor, and one of these faculty members must be from Carleton University.

The PhD comprehensive exam is divided into a major and minor component. The granularity of each component can be flexible (e.g., they may be divided into sub-topics, corresponding to different examiners). There is also flexibility on the breadth vs. depth trade-off, but the exam components should not be defined too narrowly to become directly the thesis topic.

The supervisor can be an examiner for the major or minor component, but he cannot be the sole examiner for that component.

The duration of the written exam components are 3 hours for the major and 3 or 2 hours for the minor. The two written exams are normally held on consecutive days. The oral exam component typically takes place 1-2 weeks after the written exams.

The PhD supervisor is responsible for managing the process and the exam. The steps are as follows:

- The PhD supervisor will reach out to colleagues and assembles a committee. The supervisor collects a reading list from each committee member along with requirements for the exam (e.g., open/closed book, use of calculators, can students keep a copy of the exam questions and their written answers to prepare for the oral exam, etc.). The supervisor collates this information into a single document and asks the PhD student to submit this document as a service request.
- Once the PhD student receives the reading list, the reading list along with the form for the nomination of the exam committee needs to be submitted by the PhD student.
The service request to submit: Research related/ Comprehensive exam
Documents to attach:
 - Form: “[Nomination of Ph.D. Advisory Committee \(OCIECE\)](#)”
 - Reading list (no specific form)
- The service request for the exam committee and reading list are verified by the OCIECE graduate coordinator and approved.
- The supervisor schedules the written and oral examination. The supervisors will be responsible to reserve a room for the written exam and if desired for the oral exam. (The oral exam is typically taking place through Zoom or MS Teams). The supervisor is responsible to invigilate the written exams. The corner rooms STE-5000 may be an option. The OCIECE academic administrator will need to be informed about the date by email to Engineering Graduate Reception gprecept@uottawa.ca.

- The written exams will be collected by the supervisor and distributed to the committee for marking. If the original answers are on paper, the supervisor retains the exam answers (same as any other exam).
- The supervisor will chair the oral exam. The oral exam must give enough time for each committee member to confirm the written answers and ask clarifying question, hence the typical duration for an oral exam is 2-3 hrs. The exam is marked as satisfactory/unsatisfactory. The exam may be deemed satisfactory even if additional conditions are specified. Common conditions are the completion of an additional course to fill gaps in background, completion of an implementation project or a written report on background material.
- The supervisor will fill the form, sign it and submit it to Engineering Graduate Reception gprecept@uottawa.ca cc to all committee members and the student.
 - Form: “[Report on Comprehensive Examination](#)”