

This document is only for student guidance. It does not replace program requirements listed in the University Catalog or Graduate School Manual. Notes in brackets refer to sections in the Graduate School Manual.

Electrical Engineering Ph. D. Degree Program Requirements

- 1. Minimum of 72 credits in engineering, mathematics, and/or science courses.
 - a. For requirements governing the first 30 credits (and for the M. S. degree) see the companion document “Electrical Engineering M. S. Degree Program Requirements.” The M. S. degree may count for up to 30 of the 72 credits required for the Ph. D.
 - b. The remaining 42 credits must be completed at U. R. I. [section 7.54].
 - i. Minimum of 18 credits, beyond the first 30 credits, in formal graduate engineering, mathematics, and/or science courses. Up to three credits of special problems (ELE 591 and/or ELE 691), sometimes called “independent study,” may be counted toward this requirement. Maximum of nine credits of special problems (ELE 591 and/or ELE 691) and special topics (ELE 594 and/or ELE 694) may be counted toward this requirement. Department seminar (ELE 601 and ELE 602) may not be counted toward this requirement.
 - ii. At least 18, but no more than 24, credits of dissertation (ELE 699). Additional ELE 699 credits may be completed for no program credit.
 - c. All full-time graduate students (M. S. or Ph. D.) are required to enroll in ELE 601 every semester the course offered.
- 2. Minimum of two credits of departmental seminar (ELE 601 and ELE 602). These credits may not be counted toward the 42 credits required beyond the first 30 credits (or the M. S. degree).

Notes:

- a. The ELE Graduate Affairs Committee must approve all courses outside of engineering, math, physics, and statistics to be counted toward the credit requirements.
- b. All coursework beyond the first 30 credits (or the M. S. degree) that will be counted toward the doctorate requirements must be at the 500- or 600-level [section 9.20]. No 400-level credits may be counted toward the 42 credits required beyond the first 30 credits (or the M. S. degree) [section 9.21].
- c. To fulfill credit requirements:
 - i. a course grade of B- or higher is required in any 400-level course;
 - ii. a course grade of C or higher is required in any 500- and 600-level courses.

Electrical Engineering Ph. D. Degree Program Milestones
Graduate Manual chapters 7–9, 11
<https://web.uri.edu/graduate-manual/>

1. Program of Study (PoS) [section 7.52]
 - A. specifies major professor (“dissertation advisor”)
 - B. full-time: submit no later than end of third semester
 - C. part-time: submit no later than end of fourth semester
 - D. can be revised, but must match courses on transcript
 - E. Grad School form “Program of Study – PhD”
2. Establish Doctoral Committee [section 7.53 and 8.43.2]
 - A. specifies doctoral committee (major prof, inside dept faculty, outside dept faculty)
 - B. submitted with PoS
 - C. Grad School form “Establishment of a Doctoral Committee”
3. Students must be registered for any semester or summer term in which they take a Qualifying Exam or Comprehensive Exam or defend a dissertation. [section 7.61]
4. Qualifying Exam (QE) [section 7.55]
 - A. ELE Department requires QE of *all* Ph. D. students (regardless of M. S. status)
 - B. full-time students who start the program in the Fall must take QE during the third semester; students who start the program in the Spring must take QE during the fourth semester (ELE)
 - C. part-time students must take QE during the fifth semester (ELE)
 - D. QE is a four-hour written exam, closed-book, closed-notes, offered during Fall semester (ELE)
 - E. format: student selects three regular graduate level ELE courses (500 and above, excluding ELE 591) to be tested on, and notifies the Graduate Program Director of the selection by the required deadline. Two questions from each course selected will appear on the exam, a total of six questions; the student is required to answer four of the six questions. (ELE)
 - F. Grad School form “Results of a Qualifying Examination” (submitted by ELE dept)
 - G. non-pass students may retake QE once, the following year
5. Comprehensive Exam (CE) two parts: Written and Oral [section 7.57.1]. The student must pass both parts to pass the Comprehensive Exam.
 - A. no later than 12 months after completing “formal courses” listed on PoS
 - B. at least 12 months before dissertation defense (ELE)
 - C. CE is scheduled separately for each student by major professor
 - D. Grad School form “Request to Schedule the Written and Oral Doctoral Comprehensive Examination”
 - E. Part One – Written [section 7.57.1.1]. ELE: Research Plan
 - i. coordinated by major professor, adjudicated by doctoral committee
 - ii. at least eight hours long
 - iii. format: student develops a research plan, typically 50–100 pages, providing a full problem statement, a literature review, a full bibliography, a technical description of preliminary results, and a clear statement of the work to be done before the dissertation defense (ELE)
 - iv. requires unanimous committee decision for “passing” result

- v. Grad School form “Results of Written Doctoral Comprehensive Examination”
- F. Part Two – Oral; [section 7.57.1.2] ELE: Research Plan Defense
 - i. coordinated by major professor, attended by dissertation committee
 - ii. will be completed within four weeks of Written part (ELE)
 - iii. doctoral committee + outside member = oral CE committee (major professor is chair)
 - iv. format: a defense of the Research Plan (from the Written part) and all general knowledge contained within the Plan (ELE)
 - v. typically two hours long
 - vi. non-faculty may not attend
 - vii. assessment: (ELE)
 - a) Is the research problem well-defined and significant?
 - b) Does the student have a solid approach to solve the problem?
 - c) Are there sufficient preliminary results to support the Research Plan?
 - d) Will the final product be sufficient for a Ph.D.?
 - e) For the Oral part, does the student have sufficient communication and presentation skills to present and defend the work?
 - viii. requires unanimous committee decision for “passing” result
 - ix. if decision is “fail”: must re-take exam within 12 weeks (ELE)
 - x. after “passing” result, student writes Dissertation Proposal (ELE)
 - xi. Grad School form “Results of Oral Doctoral Comprehensive Examination” (Grad School sends blank form to major professor after Written is passed)
- G. Comprehensive Exam result valid for five years [section 7.57.1.3]
- 6. Dissertation Proposal [section 7.56]
 - i. written in University’s required format
 - ii. should be submitted during first or second semester of research credits
 - iii. must be submitted during/before seventh semester in program
 - iv. must be submitted at least six months before dissertation defense
 - v. human subjects: IRB approval; live animals: IACUC approval
 - vi. Responsible Conduct of Research training must be completed [section 7.56.1]
 - vii. Grad School form “Dissertation Proposal Approval Form”
- 7. Doctoral committee reviews progress annually, submits report to Graduate Program Director [section 8.43.2]
- 8. Dissertation must conform to the Grad School’s “Dissertation Format Guidelines”
- 9. Oral Defense of Dissertation [section 7.58.1]
 - A. doctoral committee + outside member (defense chair) = dissertation defense committee
 - B. Grad School form “Request to Schedule an Oral Defense of a Doctoral Dissertation”
 - C. at least 20 days before date of dissertation defense: [section 11.23]
 - i. at least one unbound copy of dissertation/thesis to Grad School (or, enough copies for committee members who want paper copy), plus a large envelope
 - ii. receipt from Enrollment Services for the binding/microfilming fee
 - D. not less than 15 days before defense date: student gets copies from Grad School, distributes to committee [section 11.25]
 - E. “usually” two hours long
 - F. any interested observers may attend
 - G. dissertation signed by doctoral committee and Grad School Dean (not defense chair)

H. if needed: Grad School form “Certification that Mandatory Corrections were Made to a Successfully Defended Dissertation” [section 11.28]

10. Nomination for Graduation

A. Grad School form “Nomination for Graduation – PhD”

B. usually due third week of the graduation semester

11. Grad School “Commencement Questionnaire”