

**PROGRAM OF STUDY — PhD IN ELECTRICAL AND COMPUTER
ENGINEERING
UNIVERSITY OF IDAHO, MOSCOW, ID**

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|-----------------------|---------------|----------------|-----------------------------|
| Last Name | First | Middle Initial | Student # |
| Local Address: Street | City | State | Zip |
| Local Phone | Email Address | Admission date | Expected date of graduation |

In preparation for the review of your initial Program of Study plan:

1. Obtain and review the College of Graduate Studies section of the University of Idaho Catalog and the section related to the Department of Electrical and Computer Engineering graduate programs.
2. Read the Doctoral Degree section of the Department of Electrical and Computer Engineering Graduate Program Guidelines.
3. Appoint a major professor with the College of Graduate Studies.
4. Complete and file an approved study plan with the Registrar within the first two semesters.

I. Program requirements

The plan of study allows for considerable variety of emphasis; students can take advantage of the strengths of the department in matching their interests in professional development.

A. General requirements for a doctoral degree

A successful candidate for the PhD in Electrical Engineering is responsible for all the general requirements for a doctoral degree as stated in the University of Idaho Catalog plus the requirements described in the department Graduate Program Guidelines. The remainder of this section restates some of the general requirements and includes additional requirements specific to the doctoral program in Electrical Engineering.

B. Prerequisite Requirements

A student having satisfaction of unmet prerequisite requirements as a condition of admission must complete all prerequisites described in the University of Idaho Catalog and in the ECE Department Graduate Program Guidelines before being considered to have entered the doctoral program.

C. Credit hours

A minimum of 78 credits beyond the bachelor's degree is required for the doctoral degree. At least 52 of those credits must be of 500 level courses or above. At least 39 of the 78 credits must be in courses other than ECE 600 (Doctoral Research and Dissertation). Normally 18 to 30 credits are taken at the ECE 600 level.

D. Qualifying Examination

Students are required to pass examinations in three (3) examination topic areas: one (1) depth area and two (2) breadth areas, subject to approval by the Major Professor and dissertation committee. Note that one breadth area can be chosen from outside the ECE department, based on the approval of the Major Professor and the committee members. The examinations are normally taken after the student completes the regular courses on their study plan. Possible depth and breadth areas within the Department of Electrical and Computer Engineering are:

Power Systems, Digital Systems, Microelectronics, Semiconductor, Electromagnetics, and Signals and Systems.

Students are highly encouraged to select three of the above listed topic areas for their qualifying examination with at least one exam from each of the three selected topic areas. As noted above, one breadth area could be selected from outside the ECE department, based on the approval of the Major Professor and the committee members.

The student will have the opportunity to repeat a portion of the qualifying examination once, but may not change the selected areas. The department will determine what area(s) of the examination, if any, the student must repeat.

The qualifying examination requirement may be satisfied by completing a prescribed number of 400/500-level courses in the three selected areas (one depth and two breadth) with a grade of B or better. This is to be evaluated at the time of advancement of the student to the next level of his/her candidacy.

Courses should be selected based on the following guidelines:

- 1. Depth area:** Students must take three (3) courses in the major research area. At least two (2) of those courses should be at the 500 level.
- 2. Breadth area:** Students must take at least two (2) courses from each breadth area (400 level or above and four (4) courses minimum).
- 3.** The rest of the courses are left to the discretion of the student and his/her major advisor.
- 4.** There is a 2-semester residency requirement for each PhD candidate.

If a student does not get a B or higher in selected courses in an area, they must take a written qualifying examination as described in Section II of this document.

E. Research Proposal Examination

Each doctoral candidate must obtain approval from their dissertation supervisor and dissertation committee for a dissertation topic and research plan. This approval process is called the *Research Proposal Examination* and is structured by each dissertation committee to fit each candidate's program.

Complete and successfully defend a dissertation (18-30 hours of ECE 600)

A doctoral dissertation, which is the culmination of an original and substantive research effort by the candidate, must be completed and publicly defended. This study is done under the supervision of a dissertation supervisor and dissertation committee. A dissertation supervisor is appointed by the student and approved by the department and the College of Graduate Studies, typically within the candidate's first year in the doctoral program and based on the candidate's interests.

The doctoral dissertation committee is also approved by the College of Graduate Studies based on the petition of the candidate and the approval and recommendation of the department chair. The doctoral dissertation committee is comprised of the dissertation supervisor and at least three other members of the graduate faculty, at least one of whom shall be from outside the ECE department.

Committee members facilitate and guide the candidate's academic and research development.

Before a candidate is awarded the PhD degree, each member of the doctoral dissertation committee must approve the dissertation. The completed dissertation is presented by the candidate at a public seminar and oral defense.

II. Qualifying Examination Requirements and Checklist

Date admitted to program: _____

| Area of qualifying examination | Date completed | Exam or Coursework (y/n) |
|--------------------------------|----------------|--------------------------|
| Depth: | | |
| Breadth 1: | | |
| Breadth 2: | | |

Students are required to pass examinations in three (3) examination topic areas: one (1) depth area and two (2) breadth areas, subject to approval by the dissertation supervisor and dissertation committee. As noted above, one breadth area can be chosen from outside the ECE department, based on the approval of the dissertation supervisor and the committee members. The examinations are normally taken after the student completes the regular courses on their study plan.

Possible depth and breadth areas within the Department of Electrical and Computer Engineering:

Power Systems, Digital Systems, Microelectronics, Semiconductor, Electromagnetics, and Signals and Systems.

1. A candidate must provide a list of all courses taken in the depth and breadth areas with the grades in each. If the candidate received a grade of B or higher in each course, they are considered to have passed the examination. This is evaluated at the time the students complete all of their coursework.
2. Students who do not meet the coursework grade requirement in an area must take a written qualifying exam in that area. The exam is written and graded by faculty who teach courses in that area. The breadth area examinations should emphasize fundamental senior level or introductory graduate level topics. The depth area examinations should include advanced graduate level topics related the candidate's area of research focus in addition to the fundamental topics.

PhD Examinations

Date all qualifying examinations completed: _____

Date Research Proposal examination first taken: _____

Date Research Proposal examination passed: _____

Did you complete the Research Proposal examination within one year after passing the qualifying examination? Yes No

Dissertation and doctoral dissertation committee

Dissertation Supervisor: _____

Date appointed: _____

Other members of the dissertation committee

Date appointed: _____

Note: The dissertation committee is comprised of the dissertation Supervisor and at least three other members of the graduate faculty, at least one of whom shall be from outside the department.

_____ Date the completed dissertation is presented by the candidate at a public seminar and oral defense.

_____ Date the dissertation presentation is passed.

Signatures

| | |
|---------------------------|------|
| Student | Date |
| Advisor | Date |
| Graduate Program Director | Date |
| Department Chair | Date |
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