ECE PH.D. PROGRAM
Degree Requirements and Completion

The Ph.D. is a research degree requiring completion of the Ph.D. program course requirements, satisfactory performance on the Preliminary Examination and University Qualifying Examination, and submission and defense of a doctoral dissertation.

Students in the Ph.D. program must pass the Preliminary Examination by the end of their second year of graduate study. To ensure timely progress in their research, students are strongly encouraged to identify a faculty member willing to supervise their doctoral research by the end of their first year of study.

Students should begin defining and preparing for their thesis research as soon as they have passed the Preliminary Examination. They should plan on taking the University Qualifying Examination about one year later. At the Qualifying Examination, students will give an oral presentation on research accomplishments to date and the thesis proposal to a campus-wide committee. The committee will decide if the work and proposal has adequate content and reasonable chance for success. They may require that the student modify the proposal and may require a further review.

The final Ph.D. requirements are the submission of a dissertation and the dissertation defense.

**See an ECE Graduate Student Affairs Advisor to obtain the relevant forms, check submission deadlines and process, discuss the process for taking the required examinations and schedule a suitable date and time for your examination**

Course Requirements:

The total course requirements for the Ph.D. degree are essentially the same as the M.S. degree and consist of forty-eight units (twelve quarter courses), of which at least thirty-six units must be in graduate courses. The course requirements must be completed within two years of full-time study.

NOTE: Students who already hold an M.S. degree in electrical engineering may satisfy course requirements (with approval of the academic advisor) by substituting specific graduate courses taken elsewhere. Normally, duplication of advanced degrees is not permitted. Therefore, students admitted for a Ph.D. with a Master’s degree will not be awarded a second Master’s degree in the same general field.

☐ The Application for Candidacy for the Thesis or Comprehensive Examination Plan I or II, for the Degree of Master of Arts or Sciences form must be filed no later than the second week of the quarter in which M.S. requirements are to be completed. Refer to your Degree Planner form for specific course requirements. Credits must be distributed as follows:
   i. 14 to 26 units in graduate courses in the major field,
   ii. 10 additional units in graduate courses, and
   iii. 12 units in graduate or upper-division courses.

☐ You may count no more than eight units of ECE 299 towards your course requirements.
The forty-eight units of required courses must be taken for a letter grade (A-F), except for eight units of ECE 299 (Research) for which only S/U grades are allowed. Courses for which a D or F is received may not be counted.

You must maintain an overall GPA of 3.0 or above in upper division and graduate course work undertaken, with a total of no more than 8 units of "F" and/or "U" grades. In addition, a GPA of 3.4 in the core graduate courses is generally expected.

Ph.D. Preliminary Examination:

You must find a faculty member who will agree to supervise your thesis research by the end of your first year of study. You should then devote at least half your time to research and must pass the Preliminary Examination by the end of your second year of study. This is an oral exam in which you present your research to a committee of three ECE faculty members, and are examined for proficiency in your area of specialization. You are also examined orally on material from two ECE graduate courses. A written copy of your research presentation is required for the processing of your exam paperwork. The outcome of the exam is based on your research presentation, proficiency demonstrated in your area of specialization, and overall academic record and performance in the graduate program. Successful completion of the Preliminary Examination will also satisfy the M.S. Plan II comprehensive exam requirement.

**Students are advised to consult an ECE Graduate Student Affairs Advisor at least two weeks prior to their Preliminary Exam**

Students who enter the Ph.D. program with a B.S. must submit the Final Report of the Thesis or Comprehensive Examination (Plan I or II) for the Degree of Master of Arts or Science and Graduate Degree and Diploma Application forms to the Office of Graduate Studies by the last day of the quarter in which they will receive their M.S. degree.

You must be registered in the quarter in which the M.S. degree is to be awarded.

The minimum residence requirement is three academic quarters; at least one of which must follow advancement to candidacy.

Refer to the Ph.D. Preliminary Examination Guideline document, which may be obtained from the Graduate Student Affairs office or ECE website, for further information.

University Qualifying Examination:

You should plan to take the University Qualifying Examination approximately one year after passing the Preliminary Examination. The University does not permit students to continue in graduate study for more than four years without passing this examination. The University Qualifying Examination is an oral exam in which you present your thesis proposal to a university-wide committee. After passing this exam you are “advanced to candidacy.”

**Students are advised to consult an ECE Graduate Student Affairs Advisor at least three weeks prior to their Qualifying Exam**

An Appointment of Doctoral Committee for the Degree of Doctor of Philosophy form must be submitted to the Graduate Division at least two weeks prior to a scheduled qualifying examination. The Qualifying Examination MAY NOT be taken prior to receiving written approval of the doctoral committee from Graduate Division. The standard committee consists of three members from ECE and two from outside ECE, including one tenured,
outside member. A doctoral committee conducts the qualifying examination, supervises the preparation and passes the dissertation, and administers the final examination.

The Report of the Qualifying Examination and Advancement to Candidacy for the Degree of Doctor of Philosophy form must be filed with Graduate Division at least three (3) quarters prior to the quarter in which you expect to complete requirements for the Ph.D. degree.

The following requirements must be satisfied to complete the exam:

☐ All coursework requirements are complete.

☐ All committee members must be present for the University Qualifying exam.

☐ You must have completed 3 quarters of academic residency, and be registered for the quarter in which you advance.

☐ You must have a GPA of 3.0 or above in upper division and graduate coursework, with a total of no more than eight units of "F" and/or "U" grades.

☐ The Report of the Qualifying Examination form needs to be submitted to Graduate Division, by the FIRST DAY OF INSTRUCTION, in order to be eligible for the non-resident fee waiver for the current quarter.

☐ Advancement to candidacy requires you to pay a candidacy fee to the cashier prior to submitting the Report of the Qualifying Examination form to the Dean of Graduate Division for approval.

☐ Refer to the University Qualifying Examination Guideline document, which may be obtained from the Graduate Student Affairs office or the ECE website, for further information.

Final Examination and Filing of the Dissertation:

The final Ph.D. requirements are the public defense and submission of doctoral dissertation.

**Students are advised to consult an ECE Graduate Student Affairs Advisor at least four weeks prior to their Final Exam**

The Final Report of the Final Examination and Filing of the Dissertation for the Degree of Doctor of Philosophy and Graduate Degree and Diploma Application forms must be submitted to Graduate Division with your dissertation on the Friday before the last day of Fall and Winter quarters, and one week earlier for Spring quarter.

☐ Academic Senate policy states that a draft of your dissertation shall be given to each doctoral committee member at least four weeks before the final examination date. The policy also states that the committee conducts the examination which is to be public and announced as such.

☐ All committee members are required to be present at the examination. In the event that a committee member is going to be absent at the time of the examination, this matter should be discussed with an ECE Graduate Student Affairs Advisor and/or your committee chair. The committee chair and the tenured outside member must always be present at a defense exam. The doctoral committee shall supervise and pass on your dissertation and conduct the final oral examination.
You must make an appointment with Graduate Division for a preliminary check of your dissertation. At that appointment the format is checked, instructions on the final preparation and submission of the dissertation are given.

The final version must conform to procedures outlined in the publication, Preparation and Submission Manual for Doctoral Dissertations and Masters’ Theses, which is available on Graduate Division’s website.

You must have completed 6 quarters of academic residency, of which 3 quarters must be between advancement and final examination.

You must maintain a GPA of 3.0 or above in upper division and graduate course work, have no more than 8 units of "F" or "U", and resolve all outstanding grading problems.

You must be registered and enrolled or file a general petition to pay the filing fee in lieu of registration.

You submit the dissertation along with the Final Report and Graduate Degree and Diploma Application forms to Graduate Division. Upon approval by the Dean of Graduate Division, you file the dissertation with the university archivist, who accepts it on behalf of the Graduate Council. Acceptance of the dissertation by the archivist, with second approval by the Dean of Graduate Division, represents the final step in the completion of all requirements for the doctor of philosophy degree.

Refer to the Final Examination and Filing of the Dissertation document, which may by obtained from the Graduate Student Affairs office or the ECE website for further information.

Departmental Time Limits:

Students who enter the Ph.D. program with an M.S. degree from another institution are expected to complete their Ph.D. requirements a year earlier than B.S. entrants; they must discuss their program with an academic advisor in their first quarter of residence. Specific time limits for the Ph.D. Program, assuming entry with a B.S. Degree, are as follows:

1. The Preliminary Examination must be completed by the end of the second year of full-time study (end of fourth quarter for students who enter with an M.S. degree).

2. The University Qualifying Exam must be completed before the end of the fourth year of full-time study. NOTE: Passing the UQE by the end of your third year of study is highly recommended

3. Normative Time Limit: Students are expected to complete requirements for the Ph.D. in six years of full-time study (five years with an M.S. degree)

4. Support Time Limit: Students may not receive financial support through the University for more than seven years of full-time study (six years with an M.S. degree).

5. Total Registered Time Limit: Students may not register as graduate students for more than eight years of full-time study (seven years with an M.S. degree).

NOTE: Half-Time Study: Time limits are extended by one quarter for every two quarters of approved half-time status. Students on half-time status may not take more than 6 units each quarter.