Ph.D. PRELIMINARY EXAMINATION
for Students who enter Ph.D. Program with an M.S. degree from another institution

The Ph.D. Preliminary examination 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 purpose of the exam is to determine whether you have the aptitude and motivation necessary for completing dissertation work. Your exam result is based on your research presentation, proficiency demonstrated in your area of specialization, and overall academic record and performance in the graduate program.

The outcome of your exam will determine whether or not you will be allowed to continue in the Ph.D. program.

NOTE: University policy states that duplication of advanced degrees is not permitted. As such, students who enter with a master's degree in Electrical Engineering will not be awarded a 2nd master's degree from ECE.

**You must pass the Preliminary Examination by your fourth quarter of study**

Course Requirements

- The course requirements for the Ph.D. degree are essentially the same as the M.S. and consist of forty-eight units (of which 36 must be in graduate courses). 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. Refer to the degree planner form for your discipline area for a list of core courses. The degree planner form may by obtained from the Graduate Student Affairs office or the ECE website.
- Your faculty/research advisor will help you select additional (if any) courses and approve your overall academic curriculum.

Scholarship Requirements

- Course work must be taken for a letter grade (A-F), except for graduate research (e.g., ECE 299) for which only S/U grades are allowed.
- You must maintain a GPA of 3.0 overall
EXAM PROCEDURES

Initial Preparation

1. You must submit a completed Ph.D. Degree Planner for students who already hold an M.S. degree in Electrical Engineering form to the ECE Graduate Student Affairs office during your first quarter of study. This form may be obtained from the Graduate Student Affairs office or the ECE website.

2. Discuss with your research advisor your plan to take the preliminary exam. Selection of a committee, which consists of 3 ECE faculty members, needs to be made in close consultation with your advisor, who will chair the committee. It is strongly recommended that the committee include the faculty member who usually teaches the course material you chose for testing.

3. Once your exam committee is formed, you must liaise with the members to decide upon a date and time for your examination. Try to set a date and time for your exam three weeks in advance. Faculty members are very busy and are frequently out of town, especially during summer months. Keep this in mind when planning to schedule your exam.

4. You would normally take the preliminary exam during a regular quarter. You may, however, schedule the exam during the summer or between quarters to accommodate the availability of faculty.

5. You should consult an ECE Graduate Student Affairs Advisor at least two weeks prior to your preliminary exam. You will be required to provide the following information relating to your exam:
   - Date and time of exam
   - The courses on which you wish to be examined
   - Names of your exam committee members
   - Title of your research presentation

6. Once you’ve provided this information to an ECE Graduate Student Affairs Advisor, the following arrangements will be made for your exam:
   - Room booking
   - Preparation of required forms
   - Preparation of your file for the exam committee
   - An exam confirmation will be sent to you via email once initial arrangements have been made for your exam
   - An exam announcement will be sent to you and your exam committee via email two weeks prior to the exam
   - An exam reminder will be sent to you and your exam committee via email two days prior to the exam

7. Prior to your exam, obtain a key for the examination room and the projector cabinet (if applicable) from the ECE General Administrator, who is located in EBU1 2806.

Exam Format

1. The exam is intended to test:
   i. Your ability to perform, present and discuss your research, and
   ii. Your technical proficiency in your chosen discipline within ECE
2. The exam therefore consists of two parts:
   i. A research presentation and questioning by the committee on the presentation, and
   ii. An oral examination on material from two ECE graduate courses that you have specified in advance.

3. All committee members must be present during the exam, and the exam is closed to the public.

4. The preliminary exam is about 2 hours in duration. It is anticipated that the research component of the examination will be approximately 40 minutes in duration and the coursework component approximately 30 minutes; however, these times may vary significantly depending on the committee’s preferences and your progress and level of proficiency as demonstrated during the examination.

5. You should prepare a research presentation lasting (assuming no questions) approximately 40 minutes and should be prepared to answer questions from the committee both during and following the presentation. It is expected that the presentation will include a description of the problem, related background work, and your research work. Focus on your results and their context within your field. Discussion of future work should be kept brief. While each research advisor may have a slightly different perspective on what is important, the preliminary exam is an opportunity for you to demonstrate that you are able to apply your knowledge to new problems. Your research topic for this exam does not need to be related to what will eventually become your dissertation topic. You will not be evaluated on whether or not your topic is suitable for a dissertation.

6. Plan to give a practice talk to your advisor and/or fellow students at least one week before your exam. This allows you plenty of time to make revisions and helps to strengthen your advisor’s confidence in you.

7. You should provide either a written research report (about 5 pages of text) or copies of all presentation slides to the committee no less than 3 days prior to the exam. NOTE: you must also submit a copy to the ECE Graduate Student Affairs Office after your exam.

8. It is recommended that the oral examination of your mastery of the specified courses be at a level comparable to that of an oral final course examination. You will be expected to display a corresponding level of technical proficiency in order to pass the exam.

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**Results of the Exam**

1. The examination committee will evaluate your performance, bearing in mind that the purpose of the exam is to ensure that Ph.D. Candidates in ECE possess the ability to perform, present, and discuss original research at the level required to complete a Ph.D. dissertation.

2. The evaluation is based on the following criteria:
   i. Your obtained research results and presentation of these results in the examination;
   ii. Your command of advanced technical knowledge as displayed during the examination; and
   iii. Your overall academic record and performance at UCSD.

3. Your committee will determine the outcome of the examination to be one of the following:
   i. Pass students will be allowed to continue in the Ph.D. program;
   ii. Fail with Retake students must retake the exam within six months, and may be asked to complete supplementary work;
   iii. Fail without Retake students are not allowed to continue in the Ph.D. program and do not have the opportunity to retake the exam.

4. You will be informed of the outcome following the end of the exam.