

Changes to the ECE Graduate Program

- Graduate Curriculum
- PhD Candidacy Exam and Milestones
- Important Forms
- ECE Graduate Bulletin

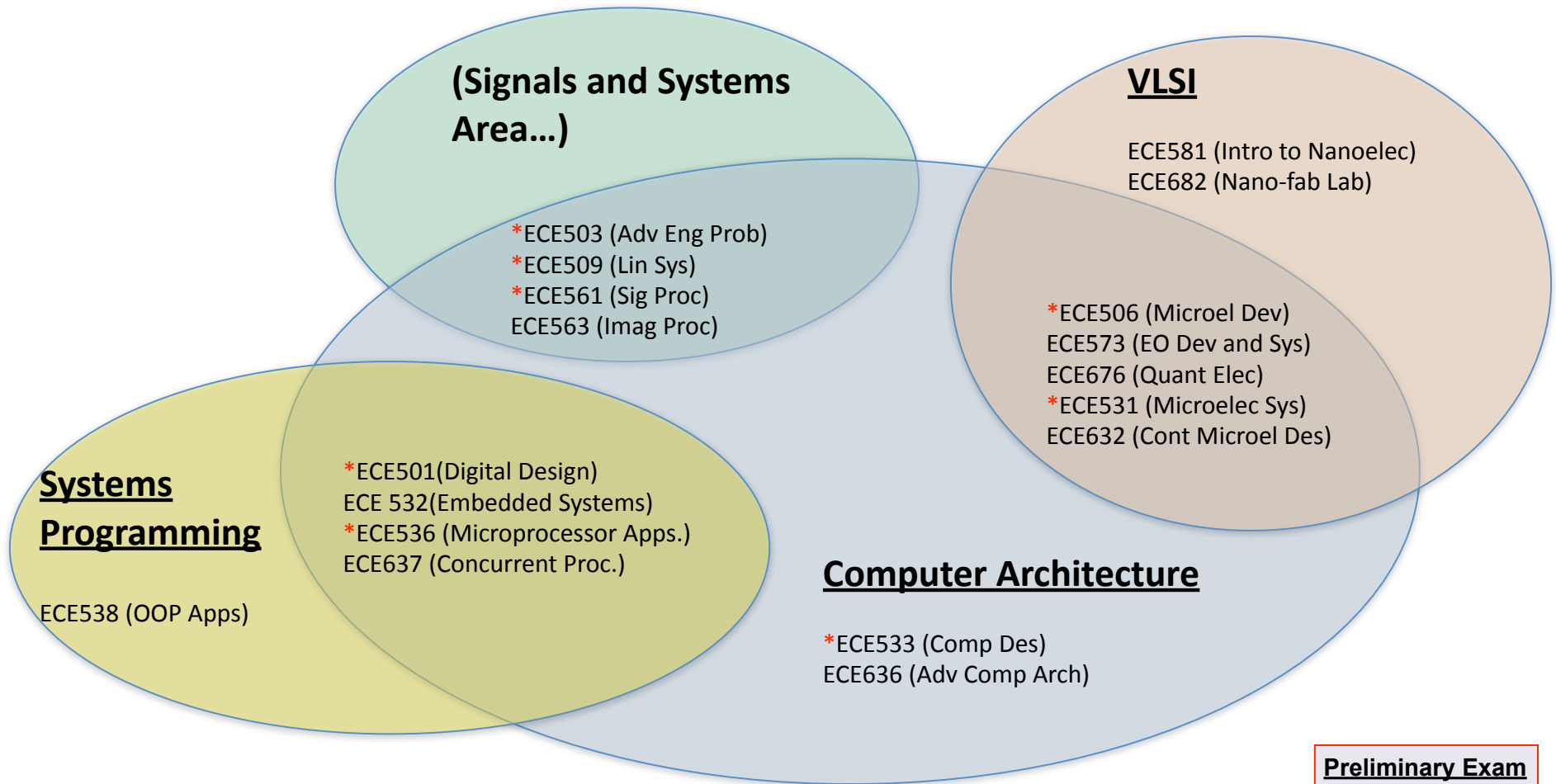
2-Oct-2012

Graduate Curriculum

Conceptual Reorganization into Core Areas

- We identified *three main core areas* of expertise in the ECE department:
 - ➔ Computing Systems area
 - ➔ Sensors and Devices area
 - ➔ Signals and Systems area
- Venn diagram organization of courses, sub-areas
- Gives a quick view of the department, curriculum and research
 - ★ ***Important for students, advisors, and external visitors***

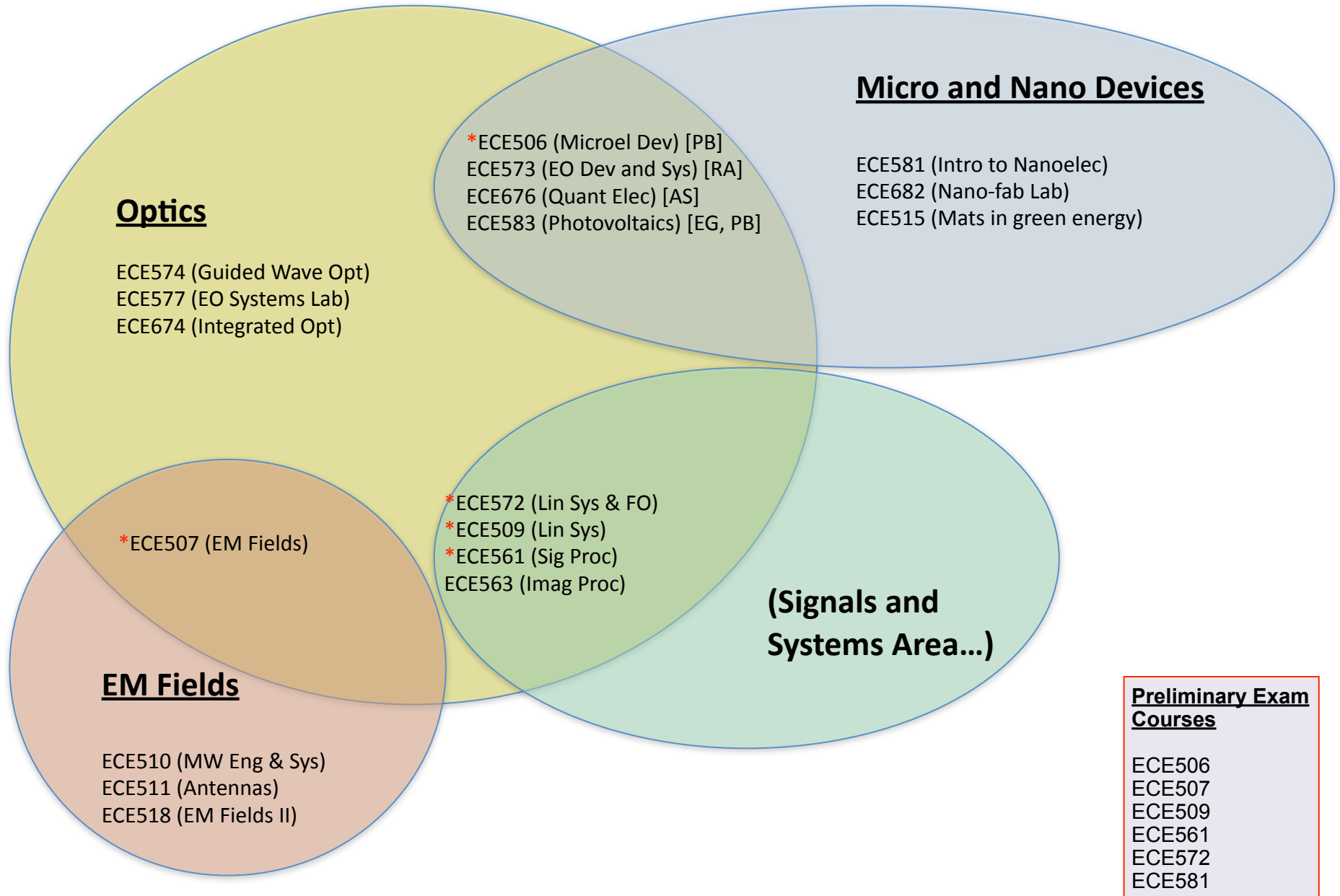
Computing Systems



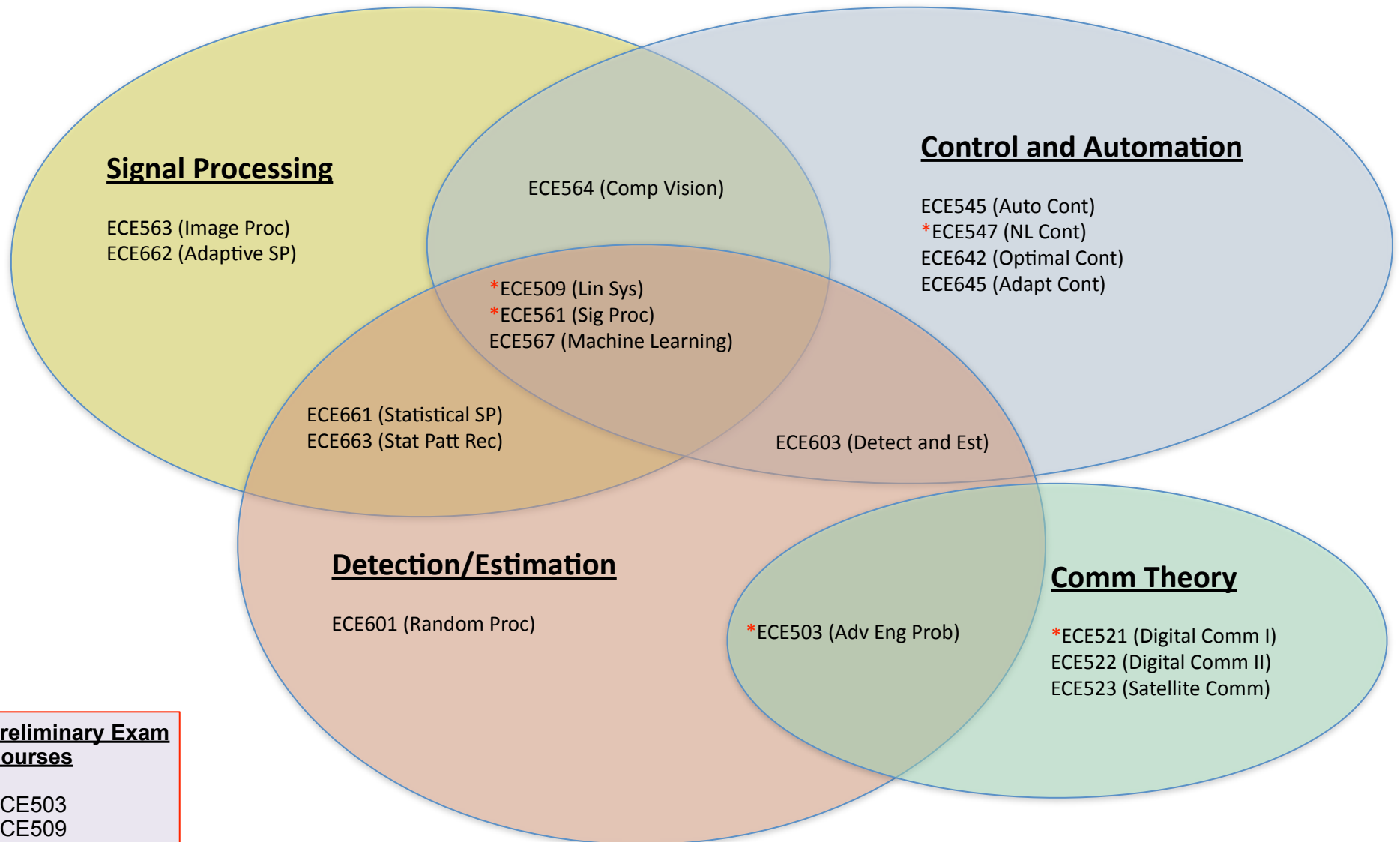
Preliminary Exam Courses

ECE501
ECE503
ECE531
ECE533
ECE536

Sensors and Devices

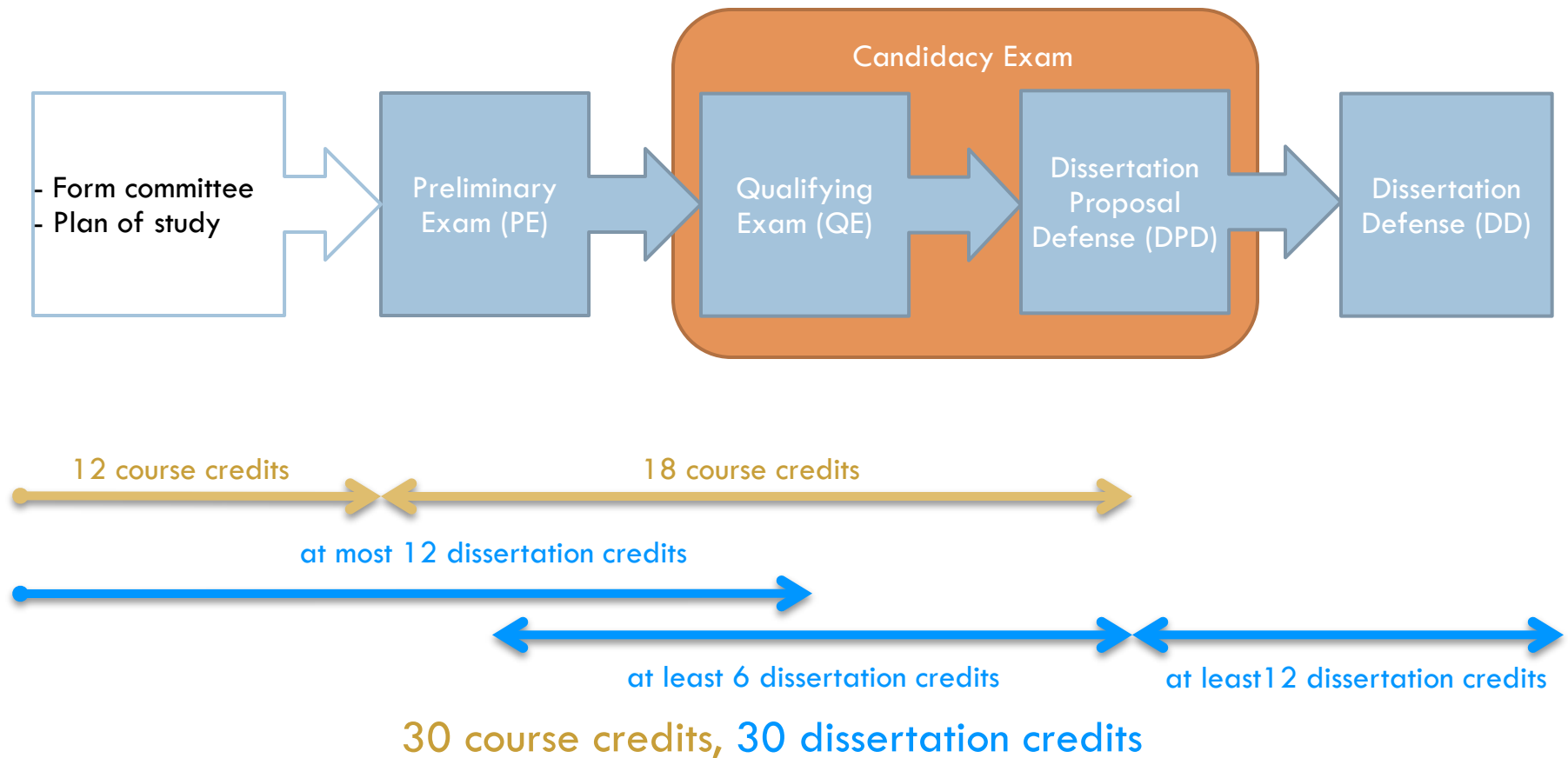


Signals and Systems



New PhD Candidacy Exam

ECE PhD Milestones at a Glance



Before the Preliminary Exam (PE)

- Form a dissertation committee
 - ➔ 3 ECE faculty chosen before preliminary exam
 - ➔ 1 external adviser chosen before dissertation proposal defense
- Plan of study
 - ➔ approved by dissertation committee
- Courses
 - ➔ at least 12 ECE graduate credits hours at UD
- Forms: http://www.udayton.edu/engineering/about/grad_resources.php

Preliminary Exam (PE)

- Purpose
 - ➔ determine baseline background
- PE format
 - ➔ written exam, 5 hour period
 - ➔ questions drawn from 4 preliminary exam classes (PEC)
 - ➔ GPC assigns appropriate faculty to prepare questions
- Logistics
 - ➔ **requirements:**
 - ★ at least 12 credits of graduate coursework at UD
 - ★ at least 12 credits of PECs
 - ➔ only once per semester
 - ➔ 2 chances to pass the PE => dismissed if 2nd attempt failed
- **May be waived** if overall GPA ≥ 3.5 in at least 4 PECs

Preliminary Exam Application Form

**UNIVERSITY OF DAYTON
ELECTRICAL AND COMPUTER ENGINEERING
PRELIMINARY EXAM APPLICATION**

TO: The Chair of ECE Graduate Program Committee

The Preliminary Examination (PE) is a diagnostic test to assess the background of the student based on questions drawn from four Preliminary Exam Courses (PEC). Before the PE is taken, students must have earned at least twelve ECE graduate credit hours beyond the MS degree and completed at least four PECs. The PE is a requirement for every student who does not apply for a waiver (see below).

Student's Name _____
Date

List 1: List twelve ECE credits of graduate courses the student completed at UD.

Class	Institution	Date	Grade
	University of Dayton		
	University of Dayton		
	University of Dayton		
	University of Dayton		

List 2: List four PECs (or equivalent courses at another university) that the student completed. The approved PECs are: ECE 501, 503, 506, 507, 509, 521, 531, 533, 536, 547, 561, 572, and 581. They may include classes taken during MS, and they may overlap with **List 1**.

Class	Institution	Date	Grade

Preliminary Exam: Student applies to take the Preliminary Exam in the Fall Winter semester. Questions for PE will be drawn from **List 2**.

Waiver: The student may apply for PE requirement waiver if the combined GPA of four PECs taken at the University of Dayton is greater than or equal to 3.5.

Students who have taken one or more PECs at another institution may also apply for a PE waiver. The waiver will be granted if the student has a UD GPA (List 1) greater or equal to 3.5, and the combined GPA of four PECs (taken at UD or elsewhere) is 3.5 or above.

Student applies for PE requirement waiver. GPA of **List 1** is _____. GPA of **List 2** is _____. (Attach appropriate documentation, such as class syllabi for classes not taken at UD.)

Chairperson, Dissertation Advisory Committee _____
Date

<p><i>For official use only.</i></p> <p>_____ Chairperson, Graduate Program Committee _____ Date</p>	<p>Preliminary Exam is</p> <p><input type="checkbox"/> Passed</p> <p><input type="checkbox"/> Failed</p> <p><input type="checkbox"/> Waived</p>
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Qualifying Exam (QE)

- First part of the Candidacy Exam
- Purpose
 - ➔ assess ability to carry out independent, unsupervised research leading to a well thought written report
- QE format
 - ➔ a written and oral exam
 - ➔ a research question formulated by the candidacy committee
 - ➔ **written**: the student is given approximately a month to work on the problem and submit a written report
 - ➔ **oral**: a brief presentation on the research problem
 - ➔ **outcomes**: (requires unanimous vote) pass, conditional pass, fail
 - ★ conditional pass: committee recommends actions student must fulfill
- Logistics
 - ➔ **requirements**: no more than 12 dissertation credits before completing QE
 - ➔ 2 chances to pass the QE => dismissed if 2nd attempt failed

Dissertation Proposal Defense (DPD)

- Second part of the Candidacy Exam
- Purpose
 - ➔ assess qualification for a meaningful and publishable dissertation
 - ➔ defend a research idea before a critical audience
- DPD format
 - ➔ a written and oral defense
 - ➔ **written**: a written proposal
 - ➔ **oral**: presentation of preliminary doctoral level research work
 - ➔ **outcomes**: (requires unanimous vote) accept, conditional accept, reject
 - ★ conditional accept: committee recommends actions student must fulfill
- Logistics
 - ➔ **requirements**:
 - ★ all courses completed
 - ★ at least 6 dissertation credits before DPD
 - ★ at least 12 dissertation credits before DD

Dissertation Defense (DD)

- Purpose
 - ➔ assess the quality of research work and dissertation
 - ➔ defend a research idea before a critical audience
- DD format
 - ➔ a written and oral defense
 - ➔ **written**: a written dissertation
 - ➔ **oral**: presentation of doctoral research work
 - ➔ **outcomes**: (requires unanimous vote) accept, conditional accept, reject
 - ★ conditional accept: committee recommends actions student must fulfill
- Logistics
 - ➔ **requirements**:
 - ★ at least one journal submission
 - ★ all dissertation credits are taken

Other Important Forms: Doctoral Advisory Comm.

University of Dayton
School of Engineering
Doctoral Advisory Committee Appointment Form

To: All Prospective Committee Members

Before the end of the first enrolled semester, the student, in consultation with the department chair or program director, selects a major professor to serve as the chair of the doctoral advisory committee. The chair of the doctoral advisory committee will be a member of the graduate faculty. An advisory committee consisting of the chair and at least two other graduate faculty members from the programs of the School of Engineering will then be recommended for approval to the department chair or program director and to the associate dean of engineering. Appointment of one additional member of the committee from outside the student's program (i.e., other university faculty, adjunct professors, prominent researchers in industry or government) is required. One additional graduate faculty member may be appointed by the associate dean of engineering. The composition of the committee will generally reflect the student's area of study and research interest. The duties of the doctoral advisory committee include advising the student, assisting the student in preparing the program of study, administering and reporting the candidacy examination, assisting in planning and conducting research, approving the dissertation, and conducting and reporting the results of the dissertation defense. A dissertation advisor other than the chair of the doctoral advisory committee may be appointed by the doctoral advisory committee.

Student's Name	Major Field of Study	Date
1. _____ Chairperson, Graduate Faculty Member of a School of Engineering Program	_____ Dept./Program	_____ Signature
2. _____ Committee Member, Graduate Faculty Member of a School of Engineering Program	_____ Dept./Program	_____ Signature
3. _____ Committee Member, Graduate Faculty Member of a School of Engineering Program	_____ Dept./Program	_____ Signature
4. _____ Committee Member, Outside the Student's Program	_____ Dept./Program	_____ Signature
5. _____ Optional Member	_____ Dept./Program	_____ Signature
6. _____ Optional Member	_____ Dept./Program	_____ Signature

The above named student has been admitted to the Doctoral Program. The Doctoral Advisory Committee is hereby recommended:

APPROVALS:

Department Chairperson/Program Director

Associate Dean, Graduate Studies

Dean, Graduate School

Other Important Forms: Candidacy Exam Report

**UNIVERSITY OF DAYTON
SCHOOL OF ENGINEERING
CANDIDACY EXAMINATION REPORT**

TO: Advisory Committee

The student must pass all parts of the examination to be admitted to candidacy. The student is considered to have passed only when the decision of the doctoral advisory committee is unanimous. All members must sign the examination report form with an indication of their decision noted prior to its being submitted to the Assistant Dean of Graduate Engineering Programs and Research. If any part of the examination is unsatisfactory, the student will be notified in writing of the conditions for another examination. *(Excerpted from the current graduate bulletin).*

Student's Name Major Field of Study Date

PART 1 (Written and Oral Examination)

PART 2 (Oral Exam on the Dissertation Proposal)

Indication of decision is by signature and encircling Pass or Fail:

_____ Chairperson, Advisory Committee	Pass	Fail	_____ Committee Member	Pass	Fail
_____ Committee Member	Pass	Fail	_____ Committee Member	Pass	Fail
_____ Committee Member	Pass	Fail	_____ Committee Member	Pass	Fail

Unless the committee decision is unanimous for pass, the student is to be notified by the Assistant Dean of the following conditions for another exam:

This form is to be independently completed for Part 1 and Part 2 of the candidacy exam except in cases where the individual parts are administered on the same day and the decision is the same for both parts.

After both parts of the candidacy exam have been successfully passed, the Assistant Dean will notify the student of his or her admission to candidacy.

Report received: _____
Associate Dean, Graduate Studies, Engineering

Date: _____

Other Important Forms: DD Report

**UNIVERSITY OF DAYTON
SCHOOL OF ENGINEERING
DISSERTATION DEFENSE REPORT**

To: Advisory Committee

The candidate shall defend the doctoral dissertation in a public forum to demonstrate to the committee that all the preparation for which the doctoral degree is awarded has been met. The defense is open to all members of the University of Dayton faculty, student body, and interested outside parties. The members of the doctoral advisory committee, with the advisor acting as chair, will conduct this dissertation defense. For the defense to be satisfactory, the advisory committee members must agree that the dissertation defense has been successfully completed. If the candidate's defense is deemed unsatisfactory by only one member, the case will be referred to the Associate Dean of the Graduate Engineering Program and Research for appropriate action. *(Excerpted from the current graduate bulletin).*

Student's Name _____ Major Field of Study _____ Date _____

Indication of decision is by signature and encircling Pass or Fail

Chairperson, Advisory Committee Pass Fail
Name:

Committee Member Pass Fail
Name:

Committee Member Pass Fail
Name:

Committee Member Pass Fail
Name:

Committee Member Pass Fail
Name:

Committee Member Pass Fail
Name:

The above signatures represent the final decision of the Advisory Committee and indicate its approval for awarding the doctoral degree if the decision is to pass. The Associate Dean's office will notify the Graduate School of this decision.

Please return this signed report to the Dean's Office.

Report received: _____
Associate Dean, Graduate Studies, Engineering

Date: _____