

ECE Graduate Program Guidelines

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Overview

- ◆ General requirements
- ◆ Master of Science Degrees
- ◆ Master of Engineering Degrees
- ◆ Ph.D. Degrees
- ◆ Theses and Presentations
- ◆ Graduate Certificates

General Graduate Requirements

- ◆ Required paperwork at start of program:
 - Appointment of Major Professor and/or Committee Form
 - Study Plan
 - » ***Complete in first or second semester***
 - » Can be updated
 - » Online form, under the degree audit
 - ◆ Go to College of Graduate Studies Web page-forms
 - ◆ Registrar's Office Web Page, Current Students, Degree Audit for information
 - » “Legal” document
- ◆ ECE 591 every semester full time on-campus

General Graduate Requirements

- ◆ Maintain 3.0 GPA
 - Semester GPA versus
 - Cumulative GPA
 - You can't graduate if cumulative GPA < 3.0
- ◆ Application for an Advanced Degree
- ◆ You are responsible for submitting forms!

Master's Degrees

- ◆ Master of Science
- ◆ Master of Engineering
- ◆ EE and CompE
- ◆ 30 credits
 - 500 level courses
 - 400 level courses
 - Breadth area requirement for EE
 - EE majors take at least 18 credits of ECE 5XX

Depth and Breath Area Options

- ◆ ECE Department Depth/Breath Options
 - Analog Electronics (41X, 51X course numbers)
 - Power (42X, 52X course numbers)
 - Electromagnetics (43X and 53X numbers)
 - Digital Systems (44X and 54X numbers)
 - Systems (45X, 47X, 55X and 57X numbers)
 - Semiconductor Devices (46X and 56X)
 - Special Topics on course by course basis

Common Breadth Areas Outside of ECE Department

- Other Engineering Disciplines (ME, CE, etc)
- Computer Science
- Physics
- Math
- Engineering Management/Business
- Can use for one of the breadth areas
 - Limit of two courses for Masters
 - Can be a few more for PhD
 - Consult your major professor before taking courses

MS Option

- ◆Major Professor

- Committee member outside of ECE

- ◆Master's thesis required

- 6 credits ECE 500

- »Register ECE 500 in semester graduating

- Written thesis

- »Quality of writing matters -- tech writers

- »Don't treat major professor as proof-reader

- Distribute 1-2 weeks before defense

- “Request to Proceed with Final Defense” Form

MS Option

- ◆ Oral presentation/defense
- ◆ Expect corrections to thesis after defense
- ◆ Don't assume any of the following
 - That your committee is available the last days of the term
 - That your major professor will have free time to do review corrections at the last minute
- ◆ UI Handbook for Theses and Dissertations:
 - *<http://www.uidaho.edu/cogs/>*
look under Current Students

ME Option

- ◆ Non-thesis Master's degree
- ◆ All coursework
- ◆ Non-ECE Committee member not required
- ◆ Technical Presentation/Oral Examination
 - Department requirement
 - Approximately 30 minute presentation
 - Written summary with references
 - Quality of presentation matters
 - Plan well in advance with Major Professor

Doctoral Degree

- ◆ Admission requires major professor
- ◆ No Ph.D. in Computer Engineering
- ◆ Change of Curriculum form for current MS/ME
 - Must have signature of a major professor!
- ◆ 78 credits beyond BS
 - At least 52 credits 500 and above
 - Up to 30 credits from Master's
 - Up to 18-30 credits ECE 600 thesis

Doctoral Degree

- ◆ Major Area
- ◆ Two Breadth Areas
 - Must support thesis topic
 - One can be outside of ECE department
- ◆ Preliminary examination
 - Written exams in major area and breadth areas
 - Oral exam
 - Thesis Research Proposal
 - Advancement to candidacy after passing

Thesis Outline

- ◆ Introduction
 - Problem description
 - Describe proposed solution
- ◆ Background/Literature (quality references)
- ◆ Mathematical/Engineering Analysis
- ◆ Modeling/Lab set up
- ◆ Simulation and/or Hardware Results
- ◆ Conclusion and Future Work
- ◆ Appendices

Presentations

- ◆ PowerPoint or similar
 - Avoid fancy transitions and backgrounds
- ◆ Work from an outline
- ◆ Large fonts - Use Arial or similar type
- ◆ Each slide should have a “topic theme”
- ◆ One line bullets
- ◆ Use graphics
- ◆ Pace and timing
- ◆ Rehearse, rehearse, rehearse

Academic Certificates

- ◆ Require 12 credits

- Some required classes, some electives
- Add with graduate change of curriculum form

- ◆ Topics

- Analog Integrated Circuit Design
- Communication and Control for Power Trans
- Electric Machines and Drives
- Power Systems Protection and Relaying
- Semiconductor Theory and Devices

Summary

- ◆ Overview of ECE graduate requirements
- ◆ Thesis outline
- ◆ Presentation tips
- ◆ *You must take the initiative in this process*

Resources

- ◆ ECE Graduate Guidelines (ECE web site or ECE Department Office)
- ◆ UI College of Graduate Studies
 - <http://www.uidaho.edu/cogs/>
 - There are several videos posted for new and continuing students