

The ECE Qualifying Exam

Graduate Committee

The image features the University of Illinois at Urbana-Champaign logo, which consists of the word "ILLINOIS" in large, blue, serif capital letters. Below it, the text "UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN" is written in smaller, blue, sans-serif capital letters. The background is a blue-tinted aerial photograph of the university campus, showing buildings, trees, and a large open area with a white 'X' marking on the ground. A dark blue rectangular block is positioned in the bottom-left corner of the image.

ILLINOIS

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Role of the Exam in Ph.D. Program

- Admission to Ph.D. candidacy is based on a **faculty vote** at a meeting held at end of the semester
 - This vote decides whether the student is allowed to continue as Ph.D. student
 - Faculty vote is “pass” or “fail”
- Faculty vote is based on three criteria:
 - Graduate course work → grades and class rank
 - Qualifying Oral Exam → committee of three faculty
 - Research → support of thesis adviser

Qualifying Exam Purpose

To provide an independent assessment of student's
potential to perform research
fundamental knowledge in primary/secondary areas

During the **Oral Exam**, Students are evaluated on:

- their ability to describe research motivation, background & context
- background knowledge from course work
- ability to understand and answer questions (oral skills)
- ability to express ideas in a written format (written skills)

Research contributions (papers) are not essential or required

Preliminary exam assesses research performed by student

Oral Exam Structure

- **Written Report:**
 - 5 pages maximum length
 - Needs to emphasize background, motivation, rationale, and scope of the research area you choose
 - Needs to be written for a broad audience (do not write for experts in the field)
 - Do not dwell on your specific contributions
 - Student should be the sole author, use your own words!
(do not copy text from published sources, plagiarism will be checked)
- **Oral Exam:**
 - 90-120 minutes should be scheduled for room, 90 minutes should typically suffice
 - Approximately 12 slides/20 minute presentation if uninterrupted
 - Needs to emphasize background, motivation, rationale, and scope of the research area you choose
 - Needs to be presented for a broad audience
 - Expect questions on area of research
 - Expect questions on background topics related to research

Consensus Evaluation Form

Student: [Tester, Joe](#)

Exam Date:

[Links to all finalized evaluations](#)

Advisor: [Smith, John](#)

Exam Location:

Evaluator: Smith, Jane (chair)

Eval Updated:

This text area fields below allow the entry of a max of 4000 characters each, 8000 characters combined. If your comments exceed this limit, please add a sentence below stating that additional comments have been sent to Laurie Fisher and then, send an email to fisher2@illinois.edu with additional comments.

Please rate the student in each of the areas below using the scale:

E = Excellent

VG = Very Good

G = Good

NI = Needs Improvement

U = Unacceptable

Knowledge of the topic of presentation

E E/VG VG VG/G G G/NI NI NI/U U

In the box below, provide detailed comments on the student's ability to answer questions on the topic of the presentation. In particular, please provide examples of the questions asked and the student's responses. While evaluating the student, please remember that the student has not even entered the PhD program and thus, cannot be expected to be at the same level as a student taking the prelim exam.

Knowledge of areas closely related to the primary area of interest

E E/VG VG VG/G G G/NI NI NI/U U

In the box below, provide detailed comments on the student's ability to answer questions on topics in their primary area and other closely related areas. Again, please provide examples of the questions asked and the student's responses.

Oral communication

Excellent Satisfactory Unsatisfactory

Written communication

Excellent Satisfactory Unsatisfactory

Suggestions for improving oral and written communication skills

Box for binding requirements: applies only if faculty vote to pass the student.

Exam Preparation

Based on the information you provide:

- committee is assigned
- questions from primary/related areas will be asked by your committee

Review relevant course work:

- Fundamentals of primary/related areas will be probed
- questions from undergraduate & graduate courses will be asked to test your grasp of fundamentals during exam

Write a report:

- committee is interested in the “why” more than the “what”
- background, motivation, and research context is most important

Give a presentation:

- practice your presentation before a live audience
- seek clarification if question asked during exam is not clear
- do not answer the wrong question
- exam is not a “time-trial”
- demonstrate your ability to think critically (“outside the box”)

Sequence of Events

Sign-Up: during the first two weeks of the semester.

Entry with B.S. degree: no later than the fourth semester;

Entry with M.S. degree: no later than the third semester;

Ph.D. Thesis Advisor Agreement must be on file.

Committee Assignment: soon after sign-up deadline

Scheduling: student must contact the examination committee members to schedule a mutually convenient 90-120 minute slot for the exam by deadline

Check committee members' general availability (teaching, travel, etc.)

Use a poll with as many slots as possible: 9:00-11:00, 9:30-11:30, 10:00-12:00, etc.

Exam Topic: Should be related to the student's research. Need not be completed research work. Examples: the student's M.S. thesis research, work carried out since the M.S. thesis, or a summary of important papers in a research area.

Report: upload a written report no later than one week prior examination date.

Reports are checked for plagiarism including self plagiarism.

Examination: student should not provide any food or drink.

Consensus Evaluation: provided to student usually a few days after the exam

Faculty Meeting: faculty meets at the end of the semester and votes to determine which students are to be admitted into Ph.D. candidacy