

The Preliminary and Final Examinations



Inquisition Scene, by Francisco Goya, 1816

The Prelim Exam: What is it?

The preliminary examination is a review of a student's proposal for thesis research, in the form of

(<https://my.physics.illinois.edu/info/index.asp?id=18>) :



- A paper of no more than 15 pages, *including* figures and bibliography.

The paper should explain the rationale for the project, the problem to be studied, the background needed to understand the problem, the methods to be employed, and the expected results. It is helpful, but not necessary, to have research results prior to taking the exam.

The prelim—particularly the introduction—should be accessible to someone outside your field, e.g., the “outside” member of your committee!

The Prelim Paper

The prelim paper MUST:

- be typed
- have 1.5 spacing between lines
- have 10-point font or larger*
- must not exceed 15 pages in length, including figures and bibliography
- the title page must contain (i) the title of the proposed thesis, (ii) an abstract, (iii) the name of the student and the advisor, and (iv) the approximate date of the exam

*this is what the rules say...I would recommend 12-point font if you want your committee to be happy with you!

The Oral Presentation for the Prelim or Thesis

In both the preliminary and final examinations, the student is expected to give a short oral presentation on his or her research area and thesis topic

- The presentation, when practiced without interruptions, should not exceed ~30 minutes for the prelim exam and ~40 minutes for the thesis defense.
- Committee questions and discussion typically lengthen the presentation to between 1.5 and 2 hours.

⇒ Technically, the oral examination is NOT restricted solely to the details of the candidate's prelim paper or thesis: topics *can in principle* cover areas of physics that the committee feels are relevant to the proposed thesis work. *In practice*, the questions asked *tend* to stay pretty close to the thesis subject.

The Prelim Exam: **When** Should You Take It?

(1). You must have passed the qual

(2). Ideally, you should have taken *both* “breadth courses”

Physics 570 Subatomic Physics

Physics 598AST Theoretical Astrophysics

Physics 550 Biomolecular Physics

Physics 560 Condensed Matter Physics I OR Physics 569 Emergent States of Matter

Physics 598 QOI Topics in Quantum Optics & Information OR Physics 598 MAP Modern Atomic Physics

(3). You must have been involved in Phys 597 research with an advisor, and have his/her approval

Students are “required” to take the prelim by the end of the fourth semester of enrollment in Physics 597 with a particular research advisor (a long list of exceptions are provided at end of talk)



The Final Exam: What is it?

The final examination is a summary of the student's thesis research, in the form of:



- The thesis (<https://my.physics.illinois.edu/info/index.asp?id=20>)

The content of the thesis is approved by your adviser and the thesis defense committee, but the [format of the thesis](#) is regulated by the Graduate College

(<http://www.grad.illinois.edu/graduate-college-thesis-requirements>).

- A 30-40 minute oral presentation (*without questions*)

Committee questions and the ensuing discussions usually comprise the main body of the 1.5 – 2 hour exam.

- Also: depositing your thesis

The final requirement needed for the PhD degree

The Final Exam: **When** Should You Take It?

When your thesis is done, but before your job starts!*

⇒ **Campus rule:** a doctoral candidate is expected to complete all degree requirements **within seven years** of first registering as a degree-seeking student in the graduate degree program, if no break is taken and the student doesn't have a previous masters degree.

⇒ It is straightforward to extend this deadline if needed

⇒ If **more than five years elapse** between a doctoral student's preliminary and final examinations, the student is required to demonstrate that his or her broad knowledge of the field is current by passing a **second** preliminary examination.

⇒ It is expected that the doctoral dissertation will be **deposited within one year** of the final examination.

*This can be trickier than it sounds!

The Final Exam: **When** Should You Take It?

When your thesis is done, but before your job starts!*

Timing issues you'll **really** have to worry about:

- ⇒ How long will it take you to write your thesis?
Probably longer than you think, ~3-6 months
- ⇒ How long will it take you to find a job?
- ⇒ How soon will your employer want you to start work?
- ⇒ When will your advisor stop supporting you?
- ⇒ Which term do you want/need to graduate in?
(See below for key dates)
- ⇒ When will your committee be available?
- ⇒ **International students:** When will your OPT start?

*This can be trickier than it sounds!

The Prelim and Final Exams: *New Rules*

- (1). You must be a full-time registered student for the academic term in which the *preliminary* and *final* exams occur. Particularly important during the summer term!
- (2). The preliminary/final exam committee chair must be a member of the [Graduate College](#).
- (3). The committee chair, student, and at least one additional voting member of the committee must be physically present for the entire duration of all oral components of the prelim and final examinations.
- (4). All voting members of the committee must be present in person or participate via teleconference or other electronic communication media during the examination, deliberation and results determination.

The Prelim/Final Exam: Key *Fall 2014* Dates

August 25, 2014: Starting August 25, 2014 *you will need to be registered for the entire Fall 2014 term.*

November 14, 2014: Last day to take your final exam and add your name to the degree list for a December 2014 graduation.

 **November 24, 2014:** If you resign your appointment before November 24, 2014, *you will lose your tuition waiver for Fall 2014.**

December 5, 2014: Last day to deposit your thesis for a December 2014 graduation.

January 20, 2015: Starting January 20, 2015, *you will need to be registered for the entire Spring 2015 term.*

*Unless you resign your appointment and deposit your thesis within 7 day of your resignation.

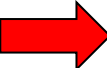
The Prelim/Final Exam: Key *Spring 2015* Dates

January 20, 2015: Starting January 20, 2015, *you will need to be registered for the entire Spring 2015 term.*

April 10, 2015: Last day to take your final exam and add your name to the degree list for a May 2015 graduation.

April 21, 2015: If you resign your appointment before April 21, 2015, *you will lose your tuition waiver for Spring 2015.**

April 24, 2015: Last day to deposit your thesis for a May 2015 graduation.

 **May 16, 2015:** May Commencement (additional deadlines to register for Commencement ceremonies)

May 18, 2015: Starting May 18, 2015, *you will need to be registered for the entire Summer 2015 term.*

*Unless you resign your appointment and deposit your thesis within 7 days after your resignation.

The Prelim/Final Exam: Key *Summer 2015* Dates

May 18, 2015: Starting May 18, 2015, *you will need to be registered for the entire Summer 2015 term.*

June 29, 2015: If you resign your appointment before June 29, 2015, *you will lose your tuition waiver for Summer 2015.**

July 3, 2015: Last day to take your final exam for an August 2015 graduation.

July 17, 2015: Last day to deposit your thesis for an August 2015 graduation.

August 24, 2015: Starting August 24, 2015, *you will need to be registered for the entire Fall 2015 term.*

*Unless you resign your appointment and deposit your thesis within 7 days after your resignation.

The Prelim Exam: Possible Outcomes

Possible outcomes of the prelim exam:

Considering all aspects of the student's performance (written paper, oral presentation, coursework), the committee will make one of **three** possible decisions:

1. The student has passed the examination and is admitted to Ph.D. candidacy;
2. The student has failed the examination and will not be admitted to Ph.D. candidacy;
3. The student has not passed the examination, but it is recommended that he/she have the opportunity to remove deficiencies in areas of study, or to improve his or her performance in research, and apply for re-examination in the following semester.

The Final Exam: Possible Outcomes

Possible outcomes of the final exam:

Considering all aspects of the student's performance (written paper, oral presentation, coursework), the committee will make one of **three** possible decisions:

1. Pass with no required revisions of the thesis;*
2. Pass pending required revisions of the thesis;
3. Fail. A second opportunity to take the examination may be given, but is not required.

*There are generally some minor (~2-3 days worth) revisions of the thesis required even in this case. Rarely, the revisions can be more extensive (a few months).

Choosing a Prelim/Final Committee



Choosing a Prelim/Final Committee

Prelim/final committees must have at least four voting members:

- At least three (including the chair) must be members of the Graduate Faculty
- At least two must be tenured faculty at UIUC
- Preferably, a majority of members must be from the Physics Dept. (not a Grad College requirement)
- Can petition for non-Grad Faculty members to be added as voting members of committee

In the Dept. of Physics, the committee usually consists of:

- The thesis adviser
- A theorist in the student's research area
- An experimentalist in the student's research area
- A fourth member outside the student's research area

The chairman of the committee is ***not*** the research advisor, but is usually a member in the same research area as the student.

Choosing a Prelim/Final Committee

To select your committee:

First, consult with your advisor and generate a list of suitable committee members (*following the guidelines given in previous slide*)

If you have questions or want advice, meet with the Associate Head for Grad Programs (me!) to discuss plans for finalizing your committee

⇒ In scheduling the preliminary examination, it is your responsibility to contact each one of the committee members and to arrange a firm date and time for the examination. (*Learn about and use Doodle Polls!*)

Once you have settled on a committee and a date and time for the exam, **give the schedule and committee list to the secretary in the Physics Graduate Office (227 Loomis) at least three weeks before the exam.** Mel will schedule the exam room, submit needed paperwork to the Grad College, and send reminders to the committee.

Advice on Choosing a Committee

(1). Schedule early in the semester!

Get on your committee members' schedules early!
Don't put off scheduling the examination until the end of a semester because faculty schedules get crowded.

(2). Don't expect, without considerable planning, to take the examination when classes are not in session or during the summer

It is possible – but challenging – to schedule during these times, and it is your responsibility to resolve time conflicts that may arise after the exam is initially scheduled.

(3). Schedule your advisor and the chair of your committee first

Schedule the other member in your specialty next, then the non-specialist member of your committee last

Advice on Choosing a Committee (cont.)

(4). Ideally, your final committee should be the same as your prelim committee

Let me know if you need/want to make changes, and I'll discuss your options with you

(5). If you want a committee member who's not in the Grad College, let us know early, as there is extra paperwork involved

(6). Make sure your chair and another committee member (and you!) will be in town for your prelim/final.

New Grad College rules require these committee members to be physically present for the prelim/final.

Arrangements for the Oral Presentation

The Grad Physics Office will make sure a room is reserved for the Prelim/Final Examinations

- As soon as the prelim paper is deposited!

The student is responsible for making sure the necessary audio/visual equipment for his/her presentation is available on the date of the exam

- Most conference rooms have overhead projectors kept in them, but if you need to reserve a portable projector, staff members in Room 213/233 Loomis and Room 38 Loomis can assist with reserving any required audio/visual equipment.

Distributing Your Prelim or Thesis

At least 2 weeks before the proposed date of the examination, you must provide copies of the prelim paper or thesis to each member of your committee

- A. If you distribute your prelim/thesis electronically, make sure each committee member receives it!
- B. Make sure your advisor has approved your prelim/thesis before distributing it to your committee!
- C. Do not make significant changes to the prelim/thesis after distributing it without notifying your committee
- D. I'd suggest circulating an electronic copy of the thesis, and ask the committee members if they want a hard copy

Addendum: **When Should You Take the Prelim?**

The “rules” state that if a graduate student does **not** take the prelim exam by the end of the fourth semester with his or her research advisor, the department will not renew the student’s RA or TA appointment in the following semester.*



*There is a long list of exceptions to this rule...

⇒ The appointment will be restarted (without back pay) after the tardy exam has been taken (pass or fail). Graduate student status is not affected by this action.

Exceptions to “4th semester in research” rule

- (i) Students signed up for independent research (Physics 597) in their 1st year must do so before the end of their 3rd year of graduate study
- (ii) If the advisor is on leave when a student’s prelim deadline is reached, the prelim paper must still be submitted by the end of the 4th semester of research; the oral exam will be administered as soon as the faculty member returns
- ⇒ (iii) If a student’s advisor feels that there is a valid reason for delay of a prelim, then the advisor may submit a formal petition to the Associate Head (me!) -- before the second week of the student’s 4th research semester – to extend the prelim deadline

Exceptions to “4th semester in research” rule

- (iv) Illness or other extenuating circumstances can be justification for delaying the prelim, but these situations must be brought to the attention of the Physics Grad Office as soon as possible
- (v) If a student switches advisors, the “Prelim clock” will begin again in the first semester the student takes Phys 597 with the new advisor
- (vi) If the Prelim Examination Committee finds a deficiency during the Prelim exam, the Department will, with the advisor’s approval, continue the student’s appointment while the issues are being resolved, usually within a semester

Exceptions to “4th semester in research” rule

(vi) If an unavoidable scheduling conflict exists with the prelim committee, the Physics Graduate Office must be notified early in the fourth semester of research, and the prelim must be held at the earliest available date.

⇒ In this case, the prelim paper must still be submitted to the committee, the Physics Grad Office and the Physics Library before the end of the fourth semester of research.