

Graduate Handbook for the  
Department of Astronomy  
University of Illinois at Urbana-Champaign

Tony Wong, Paul Ricker, Brian Fields, Bryan Dunne

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# Contents

<b>1</b>	<b>Introduction</b>	<b>3</b>
<b>2</b>	<b>Degree Requirements</b>	<b>3</b>
2.1	Requirements for the Master's Degree . . . . .	3
2.2	Requirements for the Doctoral Degree . . . . .	4
<b>3</b>	<b>Academic Advising</b>	<b>5</b>
3.1	First-Year Advising . . . . .	5
3.2	Advising Committees . . . . .	6
3.3	Annual Progress Reviews . . . . .	8
<b>4</b>	<b>Courses and Registration</b>	<b>8</b>
4.1	Astronomy Graduate Courses . . . . .	8
4.2	Registration and Course Load . . . . .	9
4.3	Leaves of Absence . . . . .	9
4.4	Reduced Registration Options . . . . .	9
4.5	Academic Probation . . . . .	10
<b>5</b>	<b>Financial Matters</b>	<b>10</b>
<b>6</b>	<b>Examinations</b>	<b>10</b>
6.1	Proficiency Exams . . . . .	10
6.2	Preliminary Exam . . . . .	12
6.3	Final Exam and Thesis Deposit . . . . .	13
<b>7</b>	<b>When Things Go Wrong: Important Campus Resources</b>	<b>15</b>
7.1	Policies and Procedures on Grievances . . . . .	15
7.2	Anti-Harassment Resources . . . . .	15
<b>A</b>	<b>Appendix: Implementation Timetable</b>	<b>15</b>

# 1 Introduction

This document specifies the policies, rules, and requirements for graduate students in the Department of Astronomy. All policies are intended to be consistent with those in the Graduate College Handbook (GCH; <https://grad.illinois.edu/gradhandbook>), which takes precedence should a conflict in policy arise. The policies described herein apply to students admitted with full graduate standing and with degree-seeking status. Information pertaining to other types of students, and regarding the admissions and registration procedures of the Graduate College, can be found in the GCH.

A graduate degree in astronomy is intended as preparation for a professional career in astronomy teaching and/or research. It can also prove valuable for a wide variety of technical careers which prize strong analytical and teaching skills and the ability to pursue long-term goals. There is much greater flexibility in a graduate degree program than in an undergraduate program. Consequently, everyone's experience of graduate school is different, largely as a result of choices of courses taken and research topics pursued. It is important that each student consider these choices carefully, bearing in mind that changes in research direction are common and often beneficial.

In addition to fulfilling the academic requirements described in this handbook, graduate students participate in department events (e.g., journal clubs, colloquia, and various social activities), meeting with visitors, applying for grants, fellowships, and observing/computer time, and taking advantage of opportunities to present work at meetings and conferences. Professional ethics are also important, and the department has been developing introductory seminars (e.g., ASTR 496-APA) that include discussion of issues regarding ethics and harassment. Links to important campus resources can be found in §7.

## 2 Degree Requirements

### 2.1 Requirements for the Master's Degree

The Master of Science Degree in Astronomy is designed to give students a solid background in astronomy, skills that can be applied in astronomy-related professions and experience in research.

Required Courses	Hours	Notes / Restrictions
ASTR 501 & 502	8	
Additional formal coursework (excludes ASTR 590, 599)	16–20	<ul style="list-style-type: none"><li>• 8 or more hrs in ASTR</li><li>• 4 or more hrs at 500-level</li><li>• Max 8 hrs credit for ASTR 404, 405, 406, 414</li></ul>
Research/Independent Study (e.g. ASTR 590)	4–8	
Total Hours Required	32	

- **Proficiency in Advanced Undergraduate Astronomy:** Students can demonstrate knowledge of the four advanced courses offered for majors (ASTR 404, 405, 406, & 414) in one of three ways: (1) by passing the corresponding proficiency exam (see §6.1) offered each August, (2) by registering for the appropriate course (or a higher level equivalent) and obtaining at least a B grade, or (3) by petitioning for equivalent course credit from another institution.

For students choosing option (2), up to 8 hours of course credit from all 400-level courses taken as a graduate student at Illinois can be used towards degree requirements.

- **Research Project:** The student should enroll in 4–8 hours of ASTR 590 (Individual Study) and submit a paper written in a scientific journal style reporting the results. The paper must be approved by the faculty member supervising the research.
- **Minimum GPA:** To avoid academic probation, a minimum cumulative GPA of 3.0 is required by the Department and a minimum semester GPA of 2.75 is required by the Graduate College.<sup>1</sup>
- **Time Limits:** A master’s degree candidate is expected to complete all degree requirements within five years of first registering as a degree-seeking student in the master’s degree program. This limit is set by the Graduate College (see the GCH for details<sup>2</sup>), and when the limit is exceeded the student is placed on academic probation.
- **Thesis Requirement:** None

## 2.2 Requirements for the Doctoral Degree

The Ph.D. degree is suitable for students who wish to pursue an academic career in astronomy or related fields. Candidates for the Ph.D. degree undertake research programs that explore new horizons in astronomy, astrophysics, astrochemistry, and cosmology. A master’s degree is not required for admission to the Ph.D. program.

### For students entering with an approved B.A./B.S. degree

Required Courses	Hours	Notes / Restrictions
ASTR 501 & 502	8	
Additional formal coursework (excludes ASTR 590, 599)	$\geq 24$	<ul style="list-style-type: none"> <li>• 8 or more hrs in ASTR</li> <li>• 8 or more hrs at 500-level (4 in ASTR)</li> <li>• Max 8 hrs credit for ASTR 404, 405, 406, 414</li> </ul>
Individual Study (ASTR 590)	4–32	Min and max which can be applied to total hours
Thesis Research (ASTR 599)	32–60	Min and max which can be applied to total hours
Total Hours Required	96	

- **Proficiency in Advanced Undergraduate Astronomy:** Students can demonstrate knowledge of the four advanced courses offered for majors (ASTR 404, 405, 406, & 414) in one of three ways: (1) by passing the corresponding proficiency exam (see §6.1) offered each August, (2) by registering for the appropriate course (or a higher level equivalent) and obtaining at least a B grade, or (3) by petitioning for equivalent course credit from another institution. For students choosing option (2), up to 8 hours of course credit from all 400-level courses taken as a graduate student at Illinois can be used towards degree requirements.

<sup>1</sup><https://grad.illinois.edu/gradhandbook/2/chapter3/academic-standing>

<sup>2</sup><https://grad.illinois.edu/gradhandbook/2/chapter5/masters-degrees#MastersTimeLimits>

**For students entering with an approved M.A./M.S. degree**

<b>Required Courses</b>	<b>Hours</b>	<b>Notes / Restrictions</b>
ASTR 501 & 502	8	Other 500-level ASTR courses may be substituted if proficiency in these subjects has been demonstrated.
Additional formal coursework (excludes ASTR 590, 599)	$\geq 0$	Up to 20 hrs may be substituted for ASTR 590+599, but max 8 hrs credit for ASTR 404, 405, 406, 414.
Individual Study (ASTR 590)	4–24	Min and max which can be applied to total hours
Thesis Research (ASTR 599)	32–52	Min and max which can be applied to total hours
Total Hours Required	64	

- **First Summer Research Project:** During the first summer in residence, each student will enroll in 4 hours of ASTR 590 (Individual Study) and will complete a research project with an Astronomy Department faculty member. A paper reporting the results is required, which must be prepared in scientific journal style and approved by the faculty member.
- **Preliminary Exam Required:** Yes. The Graduate College requires prelim completion within 4 (entering with master’s) or 5 years,<sup>3</sup> although following Department guidelines (§6.2) the exam should be taken in the 3rd year.
- **Final Exam / Dissertation Defense Required:** Yes
- **Dissertation Deposit Required:** Yes
- **Minimum GPA:** To avoid academic probation, a minimum cumulative GPA of 3.0 is required by the Department and a minimum semester GPA of 2.75 is required by the Graduate College.<sup>4</sup>
- **Time Limits:** A doctoral candidate who does not enter with a master’s degree is expected to complete all degree requirements within seven years of initial registration. A doctoral candidate who enters with an approved master’s degree from another institution is expected to complete all degree requirements within six years of initial registration. These limits are set by the Graduate College (see the GCH for details<sup>5</sup>), and when the limit is exceeded the student is placed on academic probation.

### 3 Academic Advising

At all times, each student has one or more academic advisers, in addition to the primary research adviser. The role of an academic adviser is to monitor student progress, provide mentorship and support, and participate in annual academic progress reviews required by the campus.

#### 3.1 First-Year Advising

During the first year, the Director of Graduate Studies (DGS) serves as a student’s academic adviser. The DGS meets with each student at least once during each of the student’s first two semesters. The

<sup>3</sup><https://grad.illinois.edu/gradhandbook/2/chapter6/time-limits>

<sup>4</sup><https://grad.illinois.edu/gradhandbook/2/chapter3/academic-standing>

<sup>5</sup><https://grad.illinois.edu/gradhandbook/2/chapter6/time-limits>

first meeting should take place near the beginning of the first semester and is intended to confirm the student's choice of classes for the first year. The second meeting is intended for discussion of the student's first Annual Progress Review (§3.3) and the student's plans for summer research and eventual thesis research. During the second meeting the composition of the student's Advising Committee should also be discussed. Additional meetings may be held as circumstances warrant.

## 3.2 Advising Committees

Beginning in the second year, the student meets annually with an Advising Committee consisting of three faculty members until the prelim is passed. The committee continues to monitor the student's progress thereafter. Normally this committee will be transformed into a subset of the student's prelim and thesis committees, though the composition of the committee may change if, for example, the student's research focus changes. The student's research adviser (once chosen) serves on the Advising Committee, but *the chair must be a different committee member*.

**Selection process** By the 3rd semester of the Ph.D. program, each student, in consultation with their research adviser and the Director of Graduate Studies (DGS), will select three faculty members (including the research adviser) to form an Advising Committee, subject to consent and availability. A member besides the student's primary research adviser should be asked to serve as the Committee Chair. Advising Committee members need not work in a similar research area as the student, but they should be chosen with the possibility of eventual membership in the prelim and thesis committees in mind. To facilitate this transition, it is Department policy that the committee satisfy the following requirements:

1. Of the three committee members,
  - at least two must be members of the Graduate Faculty,
  - at least two should be affiliated with Astronomy,
  - at least one should have a >0% appointment in Astronomy, and
  - at least one should be tenured at UIUC.
2. Furthermore, the person designated as Committee Chair
  - must be a member of the Graduate Faculty, and
  - must have a >0% appointment in Astronomy, or have their tenure home in Astronomy.

**Annual meetings** The Advising Committee will meet annually with the student, generally in the spring semester. Once the Prelim is passed, the Advising Committee is subsumed into the Prelim Committee and annual meetings are no longer required. The annual meeting will be scheduled at least 3 weeks in advance and consist of a 40-minute research status presentation with additional time for questions. Department staff will assist the committee chairs with scheduling the meetings to ensure they are suitably spaced in time. The presentation slides should be provided to the committee in advance. Documentation from the most recent annual student progress review (§3.3) will also be made available to the committee. The meeting is not public, but the student is encouraged to give a practice presentation during a suitable lunch seminar.

**2nd Year meeting** The student's first meeting with the committee (in the 4th semester) should be allotted up to 90 minutes to permit more in-depth evaluation of the student's research accomplishments and allow the committee to speak to both the student and adviser separately. The student's prepared presentation should still be limited to 40 minutes. The required written report on the First Summer Research Project should be provided to the committee at least 2 weeks before the meeting. The paper should be written in scientific journal style and be roughly 10 double spaced pages in length, plus figures, tables, and references. Note that the oral presentation need not be focused on the Summer Project if the student's research area has changed. It is understood that in some cases the student's research may still be in early stages, and the emphasis of the presentation may be on literature review or the development of instrumentation or research tools.

**Meeting outcomes** The chair of the Advising Committee will be responsible for managing the annual meetings and providing written feedback to the student. A standard feedback sheet will be provided that committee members will fill out during or immediately after each annual meeting. The committee chair will summarize this feedback in GradRecs and forward comments to the student and to the research adviser in a timely manner. Committee members can also relay comments on the written report to the student and adviser directly.

**Transition to Prelim** If the Preliminary Exam is taken in the 3rd year, it replaces the annual meeting for that year. (An exception is that a meeting may be canceled at the discretion of the committee if an upcoming Prelim date has been confirmed.) If the Prelim has not been taken by the time of the 3rd year annual meeting, then the annual meeting must still take place.

**Between Prelim and Final Exams** Students who have passed the Prelim are expected to meet annually with all members (jointly or individually) of their Prelim Committee. These meetings can be brief and do not require the formal presentation required in the second year. Annual progress reports must still be submitted electronically, and must be reviewed by all committee members that are on the Graduate Faculty.

**Committee replacements** Advising committee members may resign from the committee voluntarily by written notice to the student and adviser. A committee member may also be removed by the Department Chair, or by a vote of the department's Executive Committee if the Chair is conflicted, but only under exceptional circumstances (e.g., inability to participate in meetings, gross negligence, or pending/resolved grievance case). If a faculty member besides the research adviser is unable to continue on a student's advising committee for any reason, the student and adviser will solicit a replacement from among the Graduate Faculty. If the student changes research advisers, the student (or former adviser) may ask the committee chair to solicit a replacement for the former research adviser, although this is not required. Of course, the new research adviser must join the committee if not already a member. If the current committee chair is the new research adviser, then a new chair should be identified before the next annual meeting.

**Requests for deferral** A student who has been granted a leave of absence (see GCH for details<sup>6</sup>) may defer an annual meeting for as many semesters as they are on approved leave. Other requests for deferral require explicit approval by the Department Chair.

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<sup>6</sup><https://grad.illinois.edu/gradhandbook/2/chapter2/registration#LeaveofAbsence>

### 3.3 Annual Progress Reviews

Campus policy stipulates that graduate units must conduct annual academic progress reviews for all graduate students enrolled in degree-seeking programs at least once every academic year.<sup>7</sup> In Astronomy, the review takes the form of written reports that are completed electronically in the GradRecs system (<https://my.atlas.illinois.edu/gradrecs/>). Once a year, the DGS will remind all students to complete a progress report which will then be viewable by their advising committee (there is also an option to relay confidential comments to the DGS). The research adviser then adds his/her own written feedback and discusses it with the student in a face-to-face meeting. The annual reports should be completed in the first half of the spring semester so that they are available for Advising Committees to discuss in their annual meetings. The annual meeting, if held, can therefore serve as the venue for discussing the annual report with the student and adviser. After the Prelim is passed, the annual reports are still forwarded to all committee members (or at least those on the Graduate Faculty) for review and additional feedback.

## 4 Courses and Registration

### 4.1 Astronomy Graduate Courses

The standard set of graduate courses is listed below. Most are offered on a two-year cycle, and each counts as 4 credit hours. There is also a “special topics” rubric of ASTR 596 for courses that are offered by faculty on an *ad hoc* basis. These are often, but not necessarily, offered for a similar number of credit hours, and count as formal graduate courses for purposes of degree audits.

- 501: Radiative Processes [**required**]
- 502: Astrophysical Dynamics [**required**]
- 503: Observational Astronomy
- 504: Theoretical Stellar Physics
- 505: Star Formation
- 506: Galaxies
- 507: Physical Cosmology
- 510: Computational Astrophysics
- 515: General Relativity I (cross-list of PHYS 515)
- 516: General Relativity II (cross-list of PHYS 516)
- 540: Astrophysics (cross-list of PHYS 540)
- 541: Physics of Compact Objects (cross-list of PHYS 541)

Graduate students are also encouraged to register for ASTR 496 APA (Art and Practice of Astronomy) and ASTR 496 RI (Introduction to Research) in their first year (or as soon as available), to develop greater familiarity with astronomy as a profession and learn about research opportunities in the Department. Each course is 1 credit hour.

Students doing research with a faculty member can sign up for Individual Study hours (ASTR 590) until passing the Preliminary Exam. After the Preliminary Exam is completed, they should register for ASTR 599. Note that no grade is recorded for ASTR 599 until the thesis is completed. See the tables in §2 for limits on hours taken for ASTR 590 and 599.

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<sup>7</sup><https://grad.illinois.edu/gradhandbook/3/chapter6>



## 4.2 Registration and Course Load

Minimum and maximum course loads are covered in the GCH.<sup>8</sup> To briefly summarize,

- Full-time enrollment for graduate students requires taking at least 8 credit hours in the Fall and Spring semesters for students with a TA or RA appointment (12 hours for students with a fellowship or other support).
- Four credit hours are required for full-time enrollment during the summer for students with a TA or RA appointment (6 hours with a fellowship or other support).
- The maximum number of hours a student can register for is 20 for the fall/spring semester and 12 for the summer. Note, however, that the maximum hours for which one can be registered in ASTR 590 or 599 is 16 hours per semester.

Should a student be registered over the summer? Generally yes, if the student holds a fellowship or a waiver-generating appointment (defined as 25%–67% time for at least 41 days during the summer), since tuition and fees will be covered.<sup>9</sup> For students who do not hold a summer appointment, but held an appointment in the previous spring, most tuition and fees will still be covered (but not the health-related fees<sup>10</sup>), should they choose to register. In this situation, it is recommended that the research adviser—and the Office for International Student and Scholar Services for those on a student visa—be consulted before making a final decision. Registration hours should reflect the time actually spent studying on campus, or taking an approved internship course. One important note: students **must** be registered in the semester that the Preliminary and Final Exams are taken—this includes summer, if applicable.<sup>11</sup>

## 4.3 Leaves of Absence

According to the GCH, graduate students are entitled to two terms (fall and/or spring semesters) of Academic Leave during the course of a degree program.<sup>12</sup> Academic Leaves can be personal, e.g. for health reasons or to take care of dependents, or for academic progress, e.g. to study at another institution (without UIUC support). All Academic Leaves must be requested before the term begins, and cannot be used to extend the time to degree. For more information, see [the relevant section of the GCH](#), or talk to the Assistant Chair.

## 4.4 Reduced Registration Options

Students who have passed the Preliminary Exam and only need to complete the dissertation have options for reduced registration.<sup>13</sup> This includes registering *in absentia* (if you will be completing the thesis off-campus), registering for zero hours of ASTR 599, and registering for Graduate College 599 (GC 599). It is important to bear in mind that these options only reduce the cost of tuition and/or fees, they do not completely eliminate them. See [the relevant section of the GCH](#) for more information about these options.

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<sup>8</sup><https://grad.illinois.edu/gradhandbook/2/chapter2/course-loads>

<sup>9</sup><https://grad.illinois.edu/gradhandbook/2/chapter7/tuition-waivers>

<sup>10</sup><https://grad.illinois.edu/gradhandbook/2/chapter7/tuition-waivers#otherprovisions>

<sup>11</sup><https://grad.illinois.edu/gradhandbook/2/chapter6/registration-requirements>

<sup>12</sup><https://grad.illinois.edu/gradhandbook/2/chapter2/registration#LeaveofAbsence>

<sup>13</sup><https://grad.illinois.edu/gradhandbook/2/chapter2/registration#RegOptions>

## 4.5 Academic Probation

The Graduate College Handbook describes several types of academic probation.<sup>14</sup> Although probation is imposed by the Graduate College, it can be based on College requirements (such as not meeting the minimum semester GPA of 2.75) or Department requirements (such as not meeting the minimum cumulative GPA of 3.0, or failing to complete the prelim exam on time). A student on probation may not receive an assistantship unless supported by a Department petition. In the case of low GPA, a student on probation must meet the minimum semester and cumulative GPA requirements by the end of the next term of enrollment.

## 5 Financial Matters

The Graduate College web site maintains extensive resources on graduate [assistantships](#) and [benefits](#). Because the details change frequently and are not determined by Astronomy, we do not attempt to summarize them here. Students should be familiar with the policies that are relevant to their situation, including parental leave, health insurance, leaves of absence, and tuition waivers (and their taxability). Contact the Department staff for help with any of these issues.

## 6 Examinations

### 6.1 Proficiency Exams

The Astronomy Department uses a proficiency examination instead of a qualifying examination. The proficiency examination actually consists of four separate exams, covering four core areas of astrophysics, at the senior undergraduate level, that are key to preparation for graduate research. Each exam covers material that is matched to a course offered by the Department once a year:

- 404: Stellar Astrophysics
- 405: Planetary Systems (formerly Solar System and ISM)
- 406: Galaxies and the Universe
- 414: Astronomical Techniques

The examination is held over two days each August (typically, the Friday and Saturday before classes begin). Each student is allowed two attempts at each section of the exam. The first attempt is typically upon entry to the department, and the second at the start of the third semester of graduate study. As described below, there are also options to take courses in place of successfully completing the exams.

Upon admission to the graduate program, each student is asked to choose one of the following three options for meeting the proficiency requirement. Different options may be chosen for each of the four subjects.

1. Pass the appropriate section of the proficiency exam, which is administered at the start of every Fall semester. Exam results are communicated to the student by the Director of Graduate Studies (DGS) during the first week of class. A student who fails the first attempt can take the exam once more in the following year. The DGS will make a recommendation on whether re-taking the exam is advisable, or whether taking the course (option 2) is preferred.

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<sup>14</sup><https://grad.illinois.edu/gradhandbook/2/chapter3/academic-standing>

2. Pass the course with a B grade (3.0, *not* B–) or better. Currently each course is offered once per academic year. A maximum of 8 credit hours from these courses can be applied toward graduate credit. Two courses, ASTR 404 and ASTR 414, have rough equivalents at the graduate level, ASTR 504 and ASTR 503. Students needing to gain proficiency in 404 or 414 often take the 500-level course instead. **However, because the frequency of 500-level offerings cannot be guaranteed, students requesting this option must first obtain approval from the DGS and the Curriculum Committee chair.** Since ASTR 406 covers both galaxies and cosmology, a student achieving a B or better in both ASTR 506 and 507 can petition for these courses together to fulfill the 406 requirement.
3. Incoming students who have achieved a B grade (3.0) or better in an equivalent course may petition for those courses to count as proficiency. The petition should provide a brief description of the course(s), accompanied by the syllabus, textbook title(s), and copies of homework and exams administered if possible. An explicit comparison of the course(s) to the UIUC counterpart in the 404-414 series is required. The petition should be submitted by e-mail to the DGS (dgs@astro.illinois.edu) and the chair of the Curriculum Committee no later than the 1st of June prior to enrollment (preferably earlier). Decisions on petitions will be made as soon as possible after receipt, and students should expect a decision by June 15 (in cases where no additional information is needed).

**Each student is expected to pass all sections of the exam or obtain a B grade or better in the appropriate course (or equivalent) within the first two years of graduate study.** Failure to satisfy all proficiency requirements by the end of the fourth semester is grounds for dismissal. This rule is intended to allow some flexibility for course scheduling, should it not be possible to complete all four courses in the first year. Note that for each of the four subjects a student will be allowed two attempts at the proficiency examination and have two opportunities to enroll in the corresponding 400-level course (in either the 1st or 2nd year—however, each course can only be taken once). If a student believes they were subjected to unfair standards of evaluation on a proficiency examination, or in a course taken for proficiency, they may request review by the Department’s Capricious Grading Committee. Upon review, the committee may recommend re-grading of work or re-examination of the student.

The following policies apply to meeting proficiency by taking courses:

- The option to take a 400-level course for proficiency can be exercised only once (per subject), and a B grade or better **must** be obtained. Such courses cannot be repeated. Note, however, that withdrawal from a course is generally permitted as late as the 12th week of the semester.
- If a higher level (500-level) course is approved for proficiency, and a B grade is not achieved, the student must take the corresponding 400-level course (or proficiency exam) at the earliest opportunity and achieve a B grade or better (or achieve a passing score on the exam).

The following policies apply to meeting proficiency by examination:

- A student may attempt a proficiency examination in a given subject a maximum of two times during their graduate career.
- The exam format can vary from year to year, but is designed to be completed within two hours. Sample exams from recent years are provided on the Department website, along with syllabi and outlines for the corresponding courses. Solutions to the sample exams are available from the Curriculum Committee chair.

- For each exam, students will be advised if they are permitted to bring a note sheet into the exam. Regardless, a sheet of constants and formulas is generally provided, and the use of calculators [with any communication functions disabled] is allowed.
- Because the exam is meant to be a diagnostic test, there is generally not the option to omit questions. It is therefore in the student's interest to attempt a response to every question.
- The passing score is decided by the Exam Committee, taking the exam results into account, but is generally around 65%.

## 6.2 Preliminary Exam

The Preliminary (Prelim) exam<sup>15</sup> is the first major milestone after completion of the master's degree requirements. It consists of a written paper presenting the Ph.D. topic and an oral examination. Completing the preliminary exam requirement emphatically does *not* require that the student have previously submitted or published a refereed journal article.

Students are expected to pass the preliminary exam by the end of the third year of graduate study. In exceptional cases a student may request a one-year extension of this requirement from the DGS, who will consider the request in consultation with the student's Advising Committee. (Examples of cases where an extension would be considered include a change of advisors, the birth of a child, or a major illness.) At most one such extension can be granted. Students who have not completed their preliminary exams by the start of the fourth academic year (fifth with an approved extension) will be recommended to the Graduate College for academic probation using the procedure allowed for by section 3.2 of the Graduate College Handbook<sup>16</sup>. Students who have not completed their preliminary exams by the start of the sixth academic year will be ineligible for Department financial support. The Department will only support petitions for extension of time to degree if the student has completed the preliminary exam by the date of the petition.

**Committee membership:** Under normal circumstances, the Preliminary Exam Committee will consist of the Advising Committee plus one additional member, to be solicited in advance by the student in consultation with the research adviser. Note that the Graduate College imposes rules on Prelim committee membership, in particular that at least three must be members of the Graduate Faculty, and at least two must also be tenured at UIUC.

**Role of the Chair:** In keeping with guidelines for the Advising Committee, *the Chair of the Prelim Committee should not be the student's research adviser*. The chair must be a member of the Graduate Faculty, and he or she is responsible for convening the committee, conducting the examination, communicating written feedback to the student and adviser, and submitting the Preliminary Exam Result form to the Department and to the Graduate College.

**Format and Timing:** The Prelim exam should be scheduled for 2 hours, including time for committee deliberation and completion of paperwork, although in practice less time should be sufficient. It should have a blended format in which the committee interviews the student (in closed session) in addition to sitting for a research presentation. Each committee member should complete a feedback sheet during the exam. Explicit skills to be evaluated should include the

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<sup>15</sup>A full description of the rules governing the prelim exam can be found at <https://grad.illinois.edu/gradhandbook/2/chapter6/committees-exams#prelim>

<sup>16</sup><https://go.grad.illinois.edu/handbook>

student's understanding of the theoretical and observational context of the project and his or her ability to estimate relevant physical parameters from basic principles. The committee members should ask questions in turn so each has the opportunity to pose at least one question.

**Written component:** The student should provide the committee with a written report, in AAS-TeX format, describing their research outcomes to date and plan for completing the thesis. The report should be roughly 20 double-spaced pages in length (including figures but excluding long tables and references) and made available to committee members at least 2 weeks before the exam. If the report is provided as a URL, it must point to a **static, dated document** and not to a document-in-progress (such as Overleaf or Dropbox).

**Exam Result:** The committee must come to a unanimous decision on the result. The three possible outcomes are Pass, Fail (in which case a second attempt can be made before a newly constituted committee within one year), and Defer (in which case the same committee will examine the student within 180 days, and the outcome must be Pass or Fail).

### Department Guidelines:

- The Prelim should normally take the place of the annual meeting in the 3rd year. If the Advising Committee needs to meet in the 3rd year without the Prelim taking place, then a required outcome of the annual meeting will be to designate an explicit time window (not to exceed six months) during which the Prelim must be completed for the student to remain in good standing. Once this window has lapsed, the Department will notify the Graduate College to place the student on academic probation.
- It is the responsibility of the student and research adviser to choose a time window for the exam during which all committee members will be available. **Per Graduate College rules, the committee chair and at least one additional voting member must be physically present.** The scheduling of the prelim during semester breaks is *strongly* discouraged.

## 6.3 Final Exam and Thesis Deposit

The final examination<sup>17</sup> is a public, oral defense of the doctoral dissertation, and must take place on the Urbana campus. **The Graduate College requires that all doctoral candidates be registered for the entire academic term during which they take the final examination, regardless of when the thesis will be deposited or when the degree will be conferred.** The thesis must be deposited within one year of the final exam. The student does not need to be registered at the time of deposit.

**Committee membership:** The final examination committee must include at least four voting members, at least three of whom must be members of the Graduate Faculty, and at least two of whom must also be tenured at UIUC. The Department may request the inclusion of a non-Graduate Faculty member who makes a significant contribution as a voting member of the committee. Additional rules on committee membership are described in the GCH.

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<sup>17</sup>A full description of the rules governing the final exam can be found at <https://grad.illinois.edu/gradhandbook/2/chapter6/committees-exams#FinalExams>

**Role of the Chair:** The chair of the Final Exam Committee is normally the student’s research adviser. The chair must be a member of the Graduate Faculty, and is responsible for convening the committee, conducting the examination, communicating any required revisions to the student, and submitting the Final Exam Result form to the Department and to the Graduate College.

**Dissertation:** The committee should be provided with a full version of the thesis a **minimum of two weeks** before the final exam. Faculty on the committee are authorized to delay the defense if necessary to obtain the full thesis in time. It is understood that corrections can still be made before deposit, but the “full version” should not be a rough draft, and it should already have undergone a reasonable degree of proofreading. If the report is provided as a URL, it must point to a **static, dated document** and not to a document-in-progress (such as Overleaf or Dropbox). A changing document makes it harder for readers to know when to review the file, introduces inconsistency to the feedback, and could effectively undermine the 2-week deadline. If a significant update occurs during the 2-week interval, an updated version or link can be provided, along with a clear explanation about what has changed. After the defense, students should ensure that the Department Office has adequate time (at least a week is recommended) before the deposit deadline to check the thesis for compliance with Graduate College rules.

**Exam Result:** Each member of the committee must vote to either Pass or Fail the candidate. The candidate passes the final exam if the research adviser(s) vote Pass and no more than one of the remaining Committee members votes Fail. It is common for a thesis to be approved “with no revisions” at the time of the Final Exam. In such situations, the student is still responsible for implementing any requested changes before depositing, but the committee members have effectively signed off on the thesis (i.e. they do not need to approve it again).

**Certification of Degree:** If a student needs a Certification of Degree letter to start employment after the Final Exam, the University will only issue a letter after **all** requirements of the degree are completed. This includes depositing the thesis.<sup>18</sup> The University does not issue letters for students who have passed their exam but not yet deposited their thesis. **In the semester a student plans to take their final exam, they should register ONLY for ASTR 599 (Thesis Research).** The University will not issue a Certification of Degree Letter to a student enrolled in any course other than for research credit (e.g., ASTR 599).

#### **Department Guidelines:**

- The thesis should contain the equivalent of at least two refereed journal articles, at least one of which should have been already accepted for publication.
- The thesis should include a summary chapter that discusses how the parts of the thesis relate to each other and together constitute a coherent body of work.
- It is the responsibility of the student and research adviser to choose a time window for the exam during which all committee members will be available. **Per Graduate College rules, the committee chair and at least one additional voting member must be physically present.**

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<sup>18</sup><https://grad.illinois.edu/gradhandbook/2/chapter4/graduation#topic2>

## 7 When Things Go Wrong: Important Campus Resources

### 7.1 Policies and Procedures on Grievances

The department generally encourages students with a grievance to first attempt informal resolution of their problems by contacting a trusted faculty or staff member. In most instances, informal resolution can lead to a satisfactory outcome that is agreeable to all parties while protecting student confidentiality as appropriate.

Faculty able to assist you include:

- your research adviser
- other members of your advising committee
- the Director of Graduate Studies
- the Department Chair

The Graduate College strongly encourages all students who believe they have a grievance to use all appropriate avenues before initiating a formal grievance procedure. If informal resolution is not possible or satisfactory, the Graduate College maintains a formal [grievance policy and procedure](#) by which a student can appeal a decision by a faculty member or committee. The department adheres to this policy for any formal graduate student grievances that arise within the unit.

For policy guidelines, the [Student Code](#) and the [Graduate College Handbook](#) are the first place to turn to.

The Graduate College also has an [ombudsperson](#) experienced in conflict resolution, and offers a [petition process](#) to request an exception to a Graduate College policy or deadline.

### 7.2 Anti-Harassment Resources

The Campus Integrity Statement in the Student Code lays out our high expectations for conduct: “The University of Illinois at Urbana-Champaign expects its faculty, staff, students and guests to conduct themselves in accordance with the community values of civility, respect, and honesty; to maintain the highest level of integrity and exercise critical judgment in all dealings, decisions and encounters; and to maintain and strengthen the public’s trust and confidence in our institution.”

At Illinois and in this department, creating a safe working environment is the highest priority. Moreover, all members of the department, especially students, give a great deal of trust to the department and especially faculty. Sexual harassment fundamentally violates this sense of safety and trust, and is therefore something we take very seriously.

Because sexual harassment is so serious, the University has provided a number of channels for reporting it. If you have experienced sexual harassment (or are unsure if you have), we strongly urge you to report it. If you have witnessed it (or are unsure if you have), we strongly urge you to report it. Reports can be made to the Department Chair, any other faculty, or via the campus [We Care website](#).

In addition, the American Astronomical Society has instituted an [anti-harassment policy](#) that covers its meetings.

As always, call 911 or the campus police if an emergency situation arises.

## A Appendix: Implementation Timetable

For academic year 2016–2017, the schedule for implementing advising committees is as follows:

- 3rd years and higher will not have advising committees.
- 2nd years will be allowed to opt in to having advising committees, with some flexibility on completing the written report if desired.
- 1st years will be fully in the system.

The mixed (open+closed) format for the prelim exam will be enforced for students who have gone through the advising committee system, i.e. they have been through the experience of a 2nd year meeting.