Graduate Student Handbook

Department of Physics & Astronomy

Rev. 11/5/2026

Table of Contents

Table of Contents 1
Department Directory 3
Key Offices at KU 4
General Department Policies & Procedures 6
- Admissions 6
  - Deadlines 6
  - Provisional Admission 6
  - Admissions Contact Information 6
- APS Bridge Program 6
- Information for all degree seeking students 7
  - Applying for Course Waivers and Substitutions 7
  - Awards 7
  - Committees & Organizations 9
  - Declaring an advisor 10
  - Enrollment & Grading 10
  - Graduate Faculty Administrators 11
  - Graduate Teaching Assistantship Information 12
- Teaching Requirement (PhD Only) 12
  - Grievances Procedures 12
  - Multiple Career Pathways 12
  - Past requirements 13
  - Petitions 13
  - Professional Development 14
  - Semester Review 14

Degree Requirements 15
- Communication Skills (Talk Requirement) 15
- Graduate Student Tracking Process (Annual Self-Evaluation) 15
- Individualized Plan of Study 17
- Undergraduate Lab Requirement 17
- M.S. Degree 18
  - Requirements 18
- M.S. with concentration in Computational Physics and Astronomy 19
  - Requirements 19
  - Example Schedules 20

Ph.D. Degree 21
Milestones 22
Course Requirements 23
Suggested Course Schedule 24
Preliminary Candidacy 26
Decision on Preliminary Candidacy 26
Research Skills and Responsible Conduct of Research 26
Pedagogical Instruction 27
Comprehensive Examination 27
Post-Comprehensive Requirements 28
Post-Comprehensive Enrollment 28
Dissertation Defense 29
Dissertation Defense – Pass With Honors 31
Department Resources 32
University Policies and Degree Requirements 33
Appendices 45
Appendix A: Campus Resources 45
Appendix B: Community Resources 47
Appendix C: Advisor Declaration Form 48
Appendix D: Advisor Termination Form 49
Appendix E: Course Substitution Form 50
Appendix F: Comprehensive Exam Checklist 51
Appendix G: Dissertation Defense – Exam Outcome Form 52
Appendix H: M.S. Defense Checklist 53
Appendix I: Ph.D. Defense Checklist 54
Appendix J: Oral Presentation Form 55

Department Directory

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Key Offices at KU

Your unit's Director of Graduate Studies or COGA Advisor is your first stop for any questions related to graduate study or requirements. If you would like to research an issue in advance of speaking with your department or if you still have questions, the following offices can provide assistance:

College Office of Graduate Affairs (COGA)

COGA oversees graduate affairs and administers University policy for programs within the College of Liberal Arts and Sciences. The COGA website contains comprehensive information on requirements and processes pertaining to graduate education at KU. Most common questions can be answered with the information provided there, including questions regarding enrollment changes or forms, University policies regarding exams and committee requirements, and University graduation requirements. The College of Liberal Arts & Sciences' Master's Hooding Ceremony is coordinated by COGA.

COGA reviews all student petitions of University and College policy, issuing decisions on behalf of the College or referring as required to a faculty committee and/or the Office of Graduate & Postdoctoral Affairs. The more common student petitions relate to enrollment, graduate credit, leave of absence, and time limit extensions.

COGA is a resource if you have questions about petitions or graduation requirements that your department is unable to answer. Refer to the COGA website for current staff contact information.

Office of Graduate & Postdoctoral Affairs

The Office of Graduate & Postdoctoral Affairs is the administrative office that oversees graduate and postdoctoral training across all of KU. The Executive Council of Graduate Studies sets policies and regulations governing graduate study, and offers various programs for graduate students throughout the year. While COGA should be your first stop for any questions your department cannot answer, you may be referred to Graduate & Postdoctoral Affairs for certain matters, especially for questions about GTA/GRA/GA appointments and policies. The University's Doctoral Hooding Ceremony is coordinated by Graduate & Postdoctoral Affairs.

Graduate Admissions

Contact Graduate Admissions for questions regarding the KU Online Application for Graduate Study, Slate system, English proficiency requirements, and official transcripts.

Office of the University Registrar (OUR)

Contact OUR for questions related to enrollment (if the question cannot be resolved via the enrollment changes link provided above under COGA), tuition, campus fees, the Academic Calendar, and fee petitions.

Financial Aid

Contact Financial Aid for questions related to the disbursement of scholarships, fellowship awards, loans, and FAFSA.

International Student Services (ISS)

Contact ISS for questions related to international students, including enrollment requirements, international student insurance, obtaining a social security card, I-20 questions, and any issue related to student visas. While other offices on campus such as the AEC, Human Resources, or the Registrar may also handle related matters, because the students' legal status in the country may be affected, it is recommended that students contact ISS first.

Center for Teaching Excellence (CTE)

The Center for Teaching Excellence (CTE) is a University office dedicated to assisting instructors, including GTAs, to develop effective instructional techniques. The expert staff of CTE can introduce instructors to the pedagogical technology available at the University and help instructors develop new approaches to teaching. CTE specialists work with instructors individually, and also offer a diverse array of workshops and discussions. They also can guide instructors to useful scholarly literature on the subject of college teaching and learning.

Further Information and Additional Resources

The University of Kansas is committed to creating a welcoming and supportive environment on campus. The Office of Civil Rights & Title IX is responsible for administering the University of Kansas equal opportunity and non-discrimination policies and procedures, as well as encouraging a campus climate of respect and understanding of all aspects of the human experience. For more information, see the webpage for OCRTIX.

Additional information about other associated policies and procedures can be found in the university's policy library.

The policy library also has specific codes of conduct for students and faculty.

The University Ombuds office is a safe place where members of the University of Kansas community can seek informal, independent, confidential and impartial assistance in addressing conflicts, disputes, or complaints on an informal basis without fear of retaliation or judgment. Please visit the Ombuds website to learn more.

The University of Kansas prohibits discrimination on the basis of race, color, ethnicity, religion, sex, national origin, age, ancestry, disability, status as a veteran, sexual orientation, marital status, parental status, gender identity, gender expression, and genetic information in the university's programs and activities. Retaliation is also prohibited by university policy.

General Department Policies & Procedures

Admissions

Applications for the Graduate Program in the Department of Physics and Astronomy at KU are made through the Office of Graduate & Postdoctoral Affairs. The department typically releases their first round of offer letters around the beginning of January. Individuals who receive an offer have until the CGS national deadline of April 15th to accept or decline the offer. After April 15th the admissions committee will revisit availability and determine if a second round of offers can be made.

All students admitted to the MS or PhD program must meet the University's requirements for regular admission, which are linked in the University Policies section below.

Deadlines

To ensure full consideration, applicants should apply before the application submission date. Letters of recommendation should be submitted before the application deadline. Incomplete or late applications may not be considered. Please see the admissions page of the department website for specific deadlines for each application cycle and required application materials.

Provisional Admission

The department does not offer provisional admission.

Admissions Contact Information

Please contact the COGA Coordinator for all admission-related questions. Many students also reach out directly to faculty about research interests and GRA availability. Please visit the department website for a faculty directory and information about current research.

APS Bridge Program

The Department of Physics & Astronomy at the University of Kansas (KU) is honored to be an APS Bridge Program Partnership site. We are a medium sized department, approximately 30 faculty and approximately 80 graduate students, and offer a diverse range of research areas including: Astrobiophysics, Astronomy/Astrophysics, Astroparticle Physics, Biophysics, Condensed Matter Physics, Cosmology, Nanofabrication, Nanotechnology, Nonlinear and Chaotic Dynamics, Nuclear Physics, Particle Physics, Particle Theory, Physics Education Research, Plasma Astrophysics, Quantum Computing, and Space Physics.

Bridge applicants who are admitted into the program become members of our normal graduate program. They will be funded either by a research stipend or by a graduate teaching assistantship (GTA) with tuition support provided for both. Students will go through a comprehensive pedagogy training session to help prepare for their teaching assignment and we offer students the chance to take a class on proposal writing to enhance their chances of obtaining external funding. Along with this, students will be able to take undergraduate coursework when necessary as determined by the student and the

department graduate advisor. The department also offers a problem solving course to support students with their coursework.

Students are encouraged to partake early in research activities. We also have multiple professional development activities that prepare students for careers both inside and outside of academia. Students will have access to peer mentors, a variety of department led student development activities, organizations, and more. Multiple faculty are deeply involved with our graduate students, giving them many contacts with professors right off the bat and improving their integration into the program.

Information for all degree seeking students

The following are general guidelines for graduate, degree seeking students in the department.

Applying for Course Waivers and Substitutions

The following courses can be petitioned for substitution by submitting this form to the Graduate Coordinator: 711, 811, 821, 831, 871 (quantum mechanics, classical mechanics, electromagnetism, and statistical mechanics). Course waivers are considered only for classes in which the student has earned a grade of B+ or higher. Please note that courses cannot be substituted for the elective requirement or 815. Once the department Graduate Committee approves the petition, the student must pass an in-person final exam from a past offering of the KU course. The exam will be administered by the DGS, DGA, or the Graduate Committee. Petition approval and in-person exam must be completed before the particular course that is petitioned is offered for the first time and within the first year of the student's graduate studies.

Awards

GTA Awards

Near the end of the academic year, three outstanding teaching assistants are selected and are given a monetary award in honor of Emery E. Slossen. Awardees are restricted to those GTAs who have held at least quarter time appointments during both semesters of the current academic year. The Director of Laboratories is the lead decision-maker when selecting honorees and conducts thorough evaluations of all eligible candidates throughout the academic year. Evaluations shall be on the basis of:

- preparation for teaching assignments
- quality of grading and recording
- effective presentation of the material
- assisting students patiently and pleasantly

Strong consideration shall be given to performance beyond the call of duty.

Graduate Travel Fund

The department has a pool of funds set aside to help Physics & Astronomy graduate students travel to conferences and summer schools. To apply for the funds (up to $750) please fill out the form located here. Applications are reviewed by a sub-committee of the graduate committee at the beginning of each month. Early applications are strongly encouraged.

Policy on Departmental Travel Award for Graduate Students (Revised April 2019)

1. Eligibility

Students are eligible to apply if they are full-time degree-seeking graduate students, who have passed the comprehensive exam before the targeted travel date. Based on availability of funds, the awards can be given to all graduate students in good standing. Students can apply as often as needed. However, preference will be given to students who have not traveled using funds from this award within 18 months before the targeted travel date.

The award supports a trip to either a conference or a school related to the student's dissertation research. The student must give a presentation related to the dissertation research if attending a conference.

2. Award Information

Each award is up to $750. Eleven awards are expected to be made in each academic year. Unused funds in a calendar year will be added to the next academic year.

3. Application

Eligible students should submit an application including a half-page description of the conference/school, estimated cost of the entire trip, plans for additional source of support (if greater than $750), and how the trip benefits the dissertation research. For a conference trip, the applicant is required to submit evidence that an abstract has been submitted or an invitation has been received. For both conference and school trips, a letter of support from the advisor is required. Applications should be submitted via the online application form.

Students are encouraged to submit an application once an abstract has been submitted to a conference; however, an award will be issued only if the abstract is accepted for a presentation.

4. Evaluation

Applications will be evaluated monthly by a committee formed by selected members of the Graduate Committee.

5. Future revision reserved

The Graduate Committee will review this policy yearly for necessary adjustments.

Scholarships & Fellowships

The department has access to a few scholarships and fellowships. Calls for these will be sent via email by the department. The university also has a summer research scholarship, and the department will solicit calls for nominations. Students are also encouraged to apply for

awards at the university level or externally. A non-exhaustive list of opportunities can be found under Grants and Scholarships on the Useful Links page of the department website, and other opportunities will be shared as they arise.

Committees & Organizations

Departmental Assembly

The Departmental Assembly is the constituted body for full departmental meetings. The Department provides for the inclusion of regularly enrolled students in both its Departmental Assembly and its policy-making committees. The number of students in each body is at least 20 percent of the number of faculty members who hold the rank of instructor or above and who serve on that body. The Departmental Assembly is comprised of the entire faculty, plus student members of the Committees on Graduate Studies and Undergraduate Studies.

Graduate Committee

This committee comprises seven faculty members appointed by the department chairperson and two current graduate students. This committee handles graduate student petitions and reviews the program and student progress.

Society of Physics Students and Sigma Pi Sigma

The Society of Physics Students (SPS) is open to all persons with an interest in physics. Sigma Pi Sigma is the physics honors society within SPS with scholastic requirements for membership. SPS is a member society of the American Institute of Physics. This organization elects its own officers and also nominates the student representatives (both graduate and undergraduate) to the Departmental Assembly.

Graduate Student Organization

The Physics & Astronomy Department Graduate Student Organization (GSO) is led by a group of graduate students within the department. They organize events, discuss graduate student related issues, affiliate with the Physics & Astronomy writing group, and more! For more information and contact details for the executive officers, contact the Graduate Program Coordinator.

Peer Mentoring Program

The Physics & Astronomy Department has a graduate student led peer mentor program. The program is organized and maintained by the GSO. For information about this program, please contact the GSO executive officers.

Astronomy Associates of Lawrence

The Astronomy Associates of Lawrence (AAL) is an organization of students and community members interested in Astronomy. This organization elects its own officers. Please see the AAL website for information about events and membership.

Declaring an advisor

Newly admitted students are advised by the Department Graduate Advisor until they can identify an advisor among the department faculty. Below is the department protocol for declaring an advisor.

(1) To declare an advisor, an Advisor Declaration Form (Appendix C of this document) shall be signed by both the student and the advisor and submitted to the graduate coordinator.

(2) In the case of a student who is changing their advisor, an Advisor Termination Form (Appendix D) shall be signed by either the student or the advisor and submitted to the graduate coordinator. If the student has reached Candidacy, that student will then be given a period of 4 months to find a new advisor and submit a new Advisor Declaration Form. Such a student who has failed to find a new advisor before the 4-month deadline may be put on academic probation.

Enrollment & Grading

For Enrollment & Grading regulations, the department adheres to the descriptions and policies outlined in the Enrollment section of the University Policies section below and the Grading & Your GPA page of the College Office of Graduate Affairs website.

Students enrolled in Thesis or Dissertation hours may be assigned grades of "SP" (Satisfactory Progress), "LP" (Limited Progress), or "NP" (No Progress). Please see the Physics & Astronomy department's policy for assigning these grades below.

Table 1: SP/LP/NP Grading Policy

Grade	Description of Grade	Action by Program
Satisfactory Progress: SP	The student has met the goals of the semester as agreed upon with the faculty advisor. The progress made in the semester supports timely completion of the thesis or dissertation.	The student is making satisfactory progress toward their degree. No action is needed.
Limited Progress: LP	The student completed less than what was agreed upon with the faculty advisor. The semester's progress may cause delays in the timely completion of the thesis or dissertation	The College Office of Graduate Affairs (COGA) Advisor will track grades of LP in the program. If two consecutive grades of LP, or a third LP are reported, for a student, the Director of Graduate Studies (DGS) or Department Graduate Advisor (DGA) will review the grade and student's record and may recommend academic probation and/or a mentoring agreement. If additional LPs are

		reported after the mentoring agreement and/or probation, the student is no longer making satisfactory progress toward their degree and is out of good academic standing. As a result, the graduate committee may recommend dismissal of the student from the program.
No Progress: NP	The student has shown no evidence of completed work, or did not make progress toward the thesis or dissertation.	The COGA advisor will track any NP grades in the program. If a student receives an NP, the student is not making satisfactory progress toward their degree and is considered out of good academic standing. As a result, the DGS or the DGA will review the grade and student record and may place the student on academic probation, complete a mentoring agreement with the student, or recommend dismissal of the student from the program.

Incomplete Grades:
The grade "I" (Incomplete) is used to indicate work of passing quality in a course, some part of which is, for good reason, unfinished. It is given only by advance arrangement between instructor and student. Some instructors may reserve the right not to give I's. University policy on Incompletes may be found here. The Physics and Astronomy department discourages Incompletes except in truly unusual emergency situations; students are advised to make the removal of any I's on their record a matter of first priority. The accumulation of two simultaneous Incompletes or the failure to have an incomplete removed by the date determined by the instructor, in consultation with the student, will result in a graduate student falling out of good academic standing and non-reappointment to a graduate teaching assistantship. A grade of I is not an appropriate assessment in Master's Research/Thesis or Ph.D Dissertation Research courses and will not be accepted. Additionally, an Incomplete may impact eligibility for scholarships, fellowships, and travel funds.

Graduate Faculty Administrators

Prof. K.C. Kong (kckong@ku.edu) is the Director of Graduate Studies for the department.
Prof. Michael Murray (mjmurray@ku.edu) is the Graduate Student Advisor. Each student is required to meet with Prof. Murray every semester for advising until they secure a research advisor.
Prof. Hartwin Peelaers (peelaers@ku.edu) is the Chair of the Graduate Committee.

Graduate Teaching Assistantship Information

English Proficiency

Non-native English speaking students must meet the English proficiency requirements outlined in the University Policies section below in order to be hired to a Graduate Teaching Assistantship position.

Teaching Requirement (PhD Only)

All PhD students are required to have carried out a minimum of one semester of being a teaching assistant (TA) in the department prior to obtaining their PhD.

Pedagogical Instruction

Every student who receives a GTA appointment will be required to complete PHSX 702 at the first offering of the course starting with the semester of the student's initial GTA appointment. Failure to complete this class at the first opportunity may affect consideration for subsequent GTA appointments.

GTA Time Limits

A graduate student of the Department is allowed to hold a GTA appointment for a maximum number of 12 semesters (spring and fall semesters only). In special situations, a student can submit an application to extend eligibility to the Graduate Committee. Accompanying this request should be a detailed plan on graduation and a statement on the length of extension needed (up to the 16-semester maximum allowed by the College). We suggest that the detailed plan be completed using the College's Mentorship Agreement template.

Grievances Procedures

The Department of Physics & Astronomy advises that graduate students attempt to resolve issues, especially matters concerning grades, directly with the instructor or party involved, or with the Department Chair. If a grievance arises that cannot be resolved directly, or if the student does not feel comfortable attempting to resolve the issue with the Department Chair, the student should then follow the department's official grievance procedure, which has been approved by the University and may be found here.

Multiple Career Pathways

Given the current state of the tenure-track job market in most fields, doctoral students will also benefit from any information the department can provide about professional development opportunities that support a wide variety of career paths appropriate to the discipline. Students should note that it is acceptable to discuss the realities of the job market and career options with their advisor and/or DGS.

The following websites are good places for students to start exploring a range of career options beyond the tenure track, including professional positions in industry, non-profit, government, research, higher education administration, and others.

Chronicle of Higher Education – Students can set up an account in Vitae, the Chronicle's job site, to receive updates on career-related news and create customized job searches. They may also access useful articles under the "Manager Your Career" column of the Advice section. Some Chronicle content is limited to subscribers.

Inside Higher Ed – Students can explore the dedicated Career section of the website. Content does not require a subscription.

The Versatile PhD - This is a subscription service with extensive content geared toward PhD students putting their skills to use in a variety of career paths. The service includes a number of active forums used by job seekers that can provide graduate students with an early glimpse of the non-academic job market. Students must login to myKU and follow the link under the "Services" menu.

KU Career Center – While undergraduates make more frequent use of the Center, the unit's career counselors can be especially helpful to graduate students as they explore sectors beyond academe, including useful websites to seek jobs in industry, government, and non-profit sectors.

COGA Career Advising – The College of Liberal Arts & Sciences provides individual professional development and career advising to graduate students. At the above link, interested students can explore additional resources or schedule an individual appointment with an advisor.

Past requirements

Please visit the Past Requirements website for a list of changes to the Graduate Program.

Petitions

Students may submit a petition to the Graduate Committee for any department requirement. The committee will review the petition and the Graduate Coordinator will report the outcome of the petition to the student. Some petitions have required supporting documents – please contact the Graduate Coordinator for required documents.

In cases where the policy or requirement being petitioned is a College or University policy, the graduate faculty will decide whether to support the student's petition. If the faculty is in support, the department will submit a petition form to the College Office of Graduate Affairs accompanied by supporting materials as required. The petition form specifies the supporting material needed for each type of petition. These materials must accompany the petition sent to COGA. COGA's petitions webpage provides additional information regarding University petitions, including supplemental documentation that may be required by the University. Additional information regarding the more common University petitions, such as Leave of Absence, Enrollment requirements, and Time Limit Extensions may also be found in the University Policies & Degree Requirements section of this document.

In cases where the graduate faculty declines to support a University petition, no paperwork may be submitted to COGA. COGA only accepts student petitions in cases where there is documented departmental support and when the petition itself is submitted by a representative of the department.

Students should always consult with the DGS prior to submitting a petition to the graduate faculty to ensure that a petition is necessary and that all the appropriate supporting documentation is accounted for.

Professional Development

The department is invested in the professional development of graduate students. The relationship between research advisors and their students often leads to connections in their respective fields. The department also has close ties to alumni in a variety of industry and academia positions. Professional development is encouraged through workshops and other department events.

Semester Review

Each fall and spring semester, after a student's first semester, the department will provide students with written status updates. These status letters will lay out student progress in the program, with updates on department and university requirements. The Graduate Coordinator will contact the students and research advisors with the letters.

Degree Requirements

The graduate program in Physics is designed for well-prepared and highly motivated graduates of undergraduate Physics, Astronomy or Engineering Physics programs, though qualified students with more diverse backgrounds are encouraged to apply. Most physicists with graduate degrees are employed by academic institutions ranging from research universities to community colleges, industrial/technical firms, government laboratories, or federally funded research and development centers. The primary goal of the Department is to supply our graduates with the skills and insight necessary to succeed in the area of specialization that best suits their interests and talents. As demonstrated in the research overview of the Department, we offer a wide array of research opportunities touching virtually every area of active research within Physics and Applied Physics. Interactive learning and independent thinking are emphasized through classroom instruction, numerous seminars and regular colloquia, and supervised research with access to exceptional research facilities here and abroad.

The following are requirements for all degrees in the program, unless otherwise stated.

Communication Skills (Talk Requirement)

All graduate students, after their first semester, will deliver at least one oral presentation per semester related to physics or astronomy. The talk should be at least 20 minutes long. For students not yet associated with a research group, the Graduate Seminar can serve as a venue. This is a likely scenario for students who start their studies in the Spring semester, and so enroll in the Graduate Seminar in their second semester. For students who take the Graduate Seminar (PHSX 717) in their first semester (Fall), the seminar of their research group would be a more natural venue to give a talk. Students do not need to be enrolled in a research seminar to give a talk in that seminar. Class presentations can also satisfy the talk requirement, provided that they follow the length and signature requirements. When giving presentations, students should fill out an Oral Presentation Form and have it signed by two attendees, one of whom must be a KU Physics or Astronomy faculty member and the other of whom must be a PhD doing research in the department. Faculty members who sign off on the talks are expected to provide constructive feedback to the student. Off-campus venues such as collaboration meetings (when endorsed by their advisor), invited presentations, poster presentations (with an oral component and faculty confirmation) and conferences can also satisfy this requirement. For this to occur, the student must submit a copy of the agenda or speaking event with the student's presentation indicated. In this case no attendee signatures are required and the 20-minute time limit does not apply. The completed form or evidence of the off-campus presentation must be provided to the Graduate Coordinator, who will monitor student compliance with the requirement.

Graduate Student Tracking Process (Annual Self-Evaluation)

All graduate students will need to submit an annual report starting after they have been enrolled in our department for one year. This is part of our departmental student progress tracking and will be overseen by the Graduate Student Evaluation committee. This committee will specify the deadlines for handing in the forms. The failure of the student to

complete this progress report by these deadlines may affect their standing in the graduate program.

The exact implementation details depend on the stage of the student's graduate career. The Departmental Graduate Advisor has evaluation responsibilities for pre-preliminary candidacy students and for terminal master's degree students. In the preliminary candidacy stage, the Graduate Student Evaluation Committee or the student's research advisor will carry out the evaluation with oversight from the Graduate Student Evaluation Committee. In the candidacy stage, the student's research advisor carries out the evaluation with oversight from the Graduate Student Evaluation Committee.

The revised procedures are as follows broken down by stage in the program.

First semester: All students will meet with the Departmental Graduate Advisor before the start of classes of their first semester. They are also required to meet with the Departmental Graduate Advisor at least once before the end of the first semester, ideally around the time of enrollment for the second semester.

Before preliminary candidacy or students seeking a terminal master's degree: These students will submit the annual report form to the Graduate Coordinator who will forward it to the Departmental Graduate Advisor. A meeting will be initiated with the Graduate Advisor if there are concerns. The first form must be submitted between the 10th and 14th month following each student's entry into the program. Following this, the evaluation will occur at 10-14 month intervals for the duration of the student's tenure in our graduate program.

Between preliminary candidacy and passing the comprehensive exam: Students will submit their annual report form to the Graduate Coordinator. The form will be evaluated by either the Graduate Student Evaluation Committee or by their research advisor, if requested by the student and agreed to by the advisor. In the case that the research advisor completes the non-student portion part, the advisor will submit it to the Graduate Coordinator by the submission deadline.

After passing the comprehensive exam: Students will submit their annual report form to the Graduate Coordinator. Their research advisor will evaluate the form. The advisor will complete the non-student portion and submit it to the Graduate Coordinator by the nominal submission deadline. The Committee will read the submitted forms and the comments of the research advisor.

For preliminary candidates and candidates, the Graduate Student Evaluation Committee may, at their own discretion, initiate a meeting with the student and the student's research advisor, should one exist, and the committee members. A meeting should be initiated if there are unsatisfactory remarks or warning signs or if the student or research advisor requests such a meeting. The goal of the meeting should be to develop a plan to address the concerns identified from the report.

A flow chart and links to the evaluations will be sent to the students and committees in December or January, with an anticipated completion date of late February.

Individualized Plan of Study

For each student, the department will implement an individualized plan for ensuring student preparation for MS or PhD degrees in Physics. Students will be required to attend an advising session with the Departmental Graduate Advisor. This session will include a discussion of the student's transcripts and potential course enrollment. A diagnostic exam, which includes topics in Classical Mechanics, E&M, Quantum Mechanics and Thermodynamics, will be used to help assess the student's preparedness for the graduate curriculum. Also discussed will be the possibility of substituting graduate coursework and the suggested course schedule. This meeting will be used to develop an individualized plan for the student to facilitate their timely completion of graduate requirements.

Following the development of the individualized plan, the advising process will continue through regular check-ins and reviews of student progress. These reviews will include looking at student grades, research progress, and general progress toward meeting departmental milestones.

Undergraduate Lab Requirement

A candidate for an MS or PhD degree who has not had the equivalent of 6 credit hours of advanced undergraduate laboratory course work (Junior/Senior level) is required to achieve at least a B grade in one of the three advanced laboratory courses offered in the Department.

- PHSX 536 Electronic Circuits and Measurements
- PHSX 601 Design of Physical and Electronic Systems
- PHSX 616 Physical Measurements I (previously 516)

M.S. Degree

For the academic catalog degree requirements, please visit the Master of Science in Physics page of the university catalog.

The MS degree in Physics can be obtained as a terminal degree for students not wishing to continue toward a PhD or for students who complete the necessary graduate course work but do not qualify for PhD candidacy. As with the PhD degree, the MS degree presents a challenging program designed to provide an in-depth look at the foundational areas of modern Physics. For students meeting the qualifications upon entering the program, the first two years are structured around classroom and lab instruction, supplemented by research projects and regular interaction with multiple research groups within the Department. Attendance at colloquia and seminars is strongly encouraged. A master's thesis is not required but may be submitted if the candidate and the director of the candidate's research believe it to be appropriate. For complete and explicit details regarding admission to the program and progress toward a master's degree, please see the department website.

For funding and award information, please visit the Graduate Student Funding Opportunities page.

Requirements

Candidates for the Master of Science in Physics must complete a minimum of 31 credit hours of advanced lecture courses (numbered 500 or above) in physics and related subjects within seven years. Credit is not given to students who take courses at a lower level after having completed the similar upper-level courses with a grade of B- or higher. Program requirements include:

1. Within 12 months of entering the program the student must fulfill the requirements of the individualized plan of study for all graduate degrees to certify an undergraduate knowledge of Physics. Visit the Department's website for more information on those requirements and the process of certification.
2. Three basic courses:
    - PHSX 711 Quantum Mechanics I (3)
    - PHSX 821 Classical Mechanics (3)
    - PHSX 831 Electrodynamics I (3)
3. Two additional courses chosen from:
    - PHSX 718 Mathematical Methods in Physical Sciences (3)
    - PHSX 741 Nuclear Physics I (3)
    - PHSX 761 Elementary Particles I (3)
    - PHSX 781 Solid State Physics I (3)
    - PHSX 793 Physical Cosmology (3)
    - PHSX/ASTR 794 Interiors and Atmospheres (3)
    - ASTR/PHSX 796 Radiation Interstellar Medium (3)
    - ASTR/PHSX 797 Galaxies (3)
    - ASTR/PHSX 798 High Energy Astrophysics (3)
    - ASTR/PHSX 795 Space Plasma Physics (3)
    - PHSX 815 Computational Physics and Astronomy (3)

4. PHSX 717 Graduate Seminar (1) (satisfies Research Skills and Responsible Conduct of Research requirement)
5. A minimum of two hours in PHSX 899, Master's Research/Thesis, is required, with a maximum of six hours that count toward the master's degree. No more than three hours will be allowed unless a thesis on original research or a written report is presented. Students must consult with their research advisor before enrolling in more than three credit hours.
6. All graduate students, after their first semester, will deliver at least one oral presentation per semester.
7. The remaining credit hours should be advanced electives which must be either advanced lecture courses or advanced undergraduate laboratory courses. If the courses are taken outside of the Department of Physics and Astronomy, the plan must have prior approval by the graduate advisor or the director of graduate studies. (This proviso excludes seminars and special problems courses.)
8. Candidates must pass a general oral examination in physics. The examination is given shortly before completion of other work for the degree. A master's thesis is not required but may be submitted if the candidate and the director of the candidate's research believe it to be appropriate.

Please see the University Policies section below for policies regarding degree milestones, oral exam committee composition requirements, and degree time limits.

M.S. with concentration in Computational Physics and Astronomy

For the academic catalog degree requirements, please visit the Master of Science in Physics page of the university catalog.

This concentration of the M.S. degree is for students with a background in physics, astronomy, computer science, mathematics, or engineering who wish to become familiar with computer-based approaches to problems in these fields. This concentration is intended as a terminal M.S. that can be completed in two years. Minimum preparation expected includes a year's course in general physics, mathematics through differential equations, and a knowledge of python, FORTRAN, C++ or another programming language suited to scientific applications. Students pursuing this degree with an applied mathematics emphasis may wish to consider also earning a Graduate Certificate in Applied Mathematics.

Requirements

A total of at least 34 hours of credit is required for the degree. Courses numbered 500 or above count for graduate credit. Students entering the program may have satisfied several of these requirements but a total of 34 hours is still required. No more than the required six hours of PHSX 899 (Master's Research/Thesis) may be counted toward the degree.

1. Within 12 months of entering the program the student must fulfill the requirements of the individualized plan of study for all graduate degrees to certify an undergraduate knowledge of Physics. Visit the Department's website for more information on these requirements and the process of certification.
2. Required courses (25 credit hours):

    - PHSX 717 Graduate Seminar (1) (satisfies Research Skills and Responsible Conduct of Research requirement)
    - PHSX/ASTR 815 Computational Physics and Astronomy (3)
    - PHSX 718 Mathematical Physics (3)
    - MATH/EECS 781 Numerical Analysis I or EECS 639 (Introduction to Scientific Computing) (3)
    - EECS - one graduate level course (in addition to MATH/EECS 781) (3)
    - EECS or MATH - one course at the 700 level or above in EECS or MATH (in addition to MATH/EECS 781 and the EECS 500+ requirement) (3)
    - One additional PHSX/ASTR lecture course at the 500 level or above (3)
    - PHSX 899 Master's Research/Thesis (6)
3. Nine (9) or more credits from at least three lecture or lab courses from the following list of courses: (Note: No double counting: a course used to fulfill a requirement under 2. may not also be counted under 3.)
    - EECS 836 Machine Learning (3)
    - EECS 739 Parallel Scientific Computing (3)
    - EECS 868 Mathematical Optimization with Applications (3)
    - MATH 611 Time Series Analysis (3)
    - MATH 647 Applied Partial Differential Equations (3)
    - MATH 650 Nonlinear Dynamical Systems (3) (can not be counted along with PHSX 721)
    - MATH 727 Probability Theory (3) or MATH 627 Probability (3)
    - MATH 728 Statistical Theory (3) or MATH 628 Mathematical Theory of Statistics (3)
    - MATH/EECS 782 Numerical Analysis II (3)
    - MATH 783 Applied Num. Methods for PDEs (3)
    - PHSX/ASTR Courses Numbered 500 and above
4. All graduate students, after their first semester, will deliver at least one oral presentation per semester.
5. An important component of this degree is the completion and documentation of a successful computer project. A thesis must be presented that describes the basic physics involved in the project, the method of implementing the project, and a discussion of the results. An oral defense of the thesis is required before a committee of at least three members of the graduate faculty.

Example Schedules

Example 1: This schedule is meant only to illustrate one possible set of courses that would allow one to complete the degree in two years. Not all courses will necessarily always be offered in the semester indicated.

1. FA Year 1
    - PHSX 718 (3)
    - MATH 781 (3)
    - EECS 731 (3)
2. SP Year 1
    - PHSX 815 (3)
    - EECS 568 (4)
    - EECS 738 (3)

3. FA Year 2
    - PHSX 711 (3)
    - MATH 727 (3)
    - PHSX 899 (3)
4. SP Year 2
    - PHSX 761 (3)
    - EECS 739 (3)
    - PHSX 899 (3)

Example 2: This schedule is meant only to illustrate one possible set of courses that would allow one to complete the degree in two years. Not all courses will necessarily always be offered in the semester indicated.

- FA Year 1
    - PHSX 718 (3)
    - MATH 781 (3)
    - EECS 565 (4)
- SP Year 1
    - PHSX 815 (3)
    - EECS 560 (4)
    - MATH 647 (3)
- FA Year 2
    - ASTR 691 (3)
    - MATH 783 (3)
    - PHSX 899 (3)
- SP Year 2
    - PHSX 795 (3)
    - EECS 739 (3)
    - PHSX 899 (3)

Ph.D. Degree

For the academic catalog degree requirements, please see the Doctor of Philosophy in Physics page of the university catalog.

The PhD in Physics is a challenging program designed to provide an in-depth look at the foundational areas of modern Physics as a basis for the selection of an area of research specialization which becomes the focus of a PhD thesis. For students meeting the qualifications upon entering the program, the first two years are structured around classroom and lab instruction, supplemented by research projects and regular interaction with multiple research groups within the Department. Attendance at colloquia and seminars is either required or strongly encouraged. Once a student has met the requirements for PhD candidacy and has been selected to work with a PhD advisor, the emphasis shifts to full-time research with the expectation of the completion and defense of a PhD thesis, typically within 2 to 4 years. For complete and explicit details regarding admission to the program and progress toward a graduate degree, please check out the department website.

For funding and award information, please visit the Graduate Student Funding Opportunities page.

An applicant seeking to pursue graduate study in the College may be admitted as either a degree-seeking or non-degree seeking student. Please see the Graduate Studies section of the online catalog for policies and procedures governing graduate admissions. Applicants should also review the Physics and Astronomy Department requirements for Graduate Admission.

Milestones

General Milestones

There are a set of milestones on the way to completing a Ph.D. degree in the department. Each of these milestones has an associated deadline. Failure to meet any of these milestones by its deadline may result in the loss of funding (TA- or RA-ships) and/or in the denial of candidacy for the Ph.D. Completion of all milestones at earliest possible time is encouraged. The milestones are summarized here in order of expected occurrence and explained in more detail below:

1. Admission to preliminary candidacy for a Ph.D. must occur within the first two years.

2. All students will meet with the Departmental Graduate Advisor before the start of classes of their first semester. They are also required to meet with the Departmental Graduate Advisor at least once before the end of the first semester, ideally around the time of enrollment for the second semester.

Pre-comprehensive Milestones

3. Within 12 months of entering the program the student must fulfill the requirements of the individualized plan of study for all graduate degrees.
4. All students will submit an annual report form to the Graduate Coordinator who will forward it to the Departmental Graduate Advisor. A meeting will be initiated with the Graduate Advisor if there are concerns. The first form must be submitted between the 10th and 14th month following each student's entry into the program. Following this, the evaluation will occur at 10-14 month intervals for the duration of the student's tenure in our graduate program.
5. All graduate students must achieve preliminary candidacy by the end of their second year of enrollment, regardless of the number of undergraduate courses that they choose. Failure to meet this timeline for preliminary candidacy is considered a lack of progress toward the degree which may result in a loss of good academic standing and jeopardize continued financial support. Prolonged illness or extended military service may be considered exceptional circumstances. Students may petition to the Graduate Committee for extension beyond the two-year period.
6. Students will submit their annual report form to the Graduate Coordinator. The form will be evaluated by either the Graduate Student Evaluation Committee or by their research advisor, if requested by the student and agreed to by the advisor.
7. Before the end of a 12-month period following preliminary candidacy, the student is expected to join a research group in the department, or, at least to have spent significant effort in seeking a thesis advisor.

8. By 12 months following the entrance into preliminary candidacy, the student should have completed almost all lecture course work and started preparation for the comprehensive examination.
9. Before the end of an 18-month period following preliminary candidacy the student must have chosen an advisor, have completed the comprehensive exam, and should be carrying out Ph.D. research. A dissertation committee must be assembled, usually comprising the members of the comprehensive exam committee. Failure to meet this timeline for preliminary candidacy and the comprehensive exam requirement is considered a lack of progress toward the degree which may result in a loss of good academic standing and jeopardize continued financial support.

Post-comprehensive Milestones

10. The student is now a Ph.D. candidate and must abide by the rules for post-comprehensive enrollment that are outlined in the Graduate & Postdoctoral Affairs Doctoral Candidacy policy. It is encouraged that the student schedule a meeting with their dissertation committee every twelve months after admission to preliminary candidacy.

11. Students will submit their annual report form to the Graduate Coordinator. Their research advisor will evaluate the form.

12. The student will prepare a dissertation based on the student's original research, which must be satisfactory to the departmental members of the dissertation committee, and will defend it in a final oral examination before the dissertation committee. This examination is open to the public.

Course Requirements

Undergraduate Preparation

All students must adhere to the General Requirements for all Graduate Degrees, which are part of each student's Individualized Plan for ensuring student preparation.

What follows are the default set of requirements for all Physics Ph.D. candidates.
A total of 9 courses (27 hours) of advanced lecture courses are required. This excludes all seminars and colloquia.

a. Core courses
    - PHSX 711 Quantum Mechanics I
    - PHSX 811 Quantum Mechanics II
    - PHSX 821 Classical Mechanics
    - PHSX 831 Electrodynamics I
b. Other required courses
    - PHSX 717 Graduate Seminar (satisfies Responsible Conduct of Research requirement)
    - PHSX 815 Computational Physics

    - PHSX 871 Statistical Physics I (usually offered every two years. Substitution of CHEM 852 for this credit is not permitted)
c. Three additional 3 credit hour lecture courses. At least one must be a PHSX/ASTR course numbered 700 or above. Students who wish to pursue a more multidisciplinary plan of study, please see the multidisciplinary plan description below. Please note that courses cannot be substituted for this elective requirement.
d. Colloquium attendance is required according to the description in "Colloquium and Graduate Seminar" below.
e. All graduate students, after their first semester, will deliver at least one oral presentation per semester. See "Communication Skills" for an explanation
f. Our department has an undergraduate lab requirement for all graduate students. For details please visit this link.

The courses listed above comprise the Department course requirements common to all students except those pursuing a multi-disciplinary plan of study, which is described below. Subsequent work, consisting of advanced courses in appropriate fields and seminars, will be selected by the student and the advisor on the basis of the student's need and intended field of specialization. The student's dissertation committee will determine the adequacy of the student's courses and seminars and will specify the total course requirements in addition to those listed above.

Students who wish to pursue a more multidisciplinary plan of study may incorporate coursework from up to two other natural science, engineering, or mathematics (SEM) departments at KU by substituting non EPHX/PHSX/ASTR courses at the 600 level and above from these other disciplines for up to two of the three additional electives described above. The research advisor or the Departmental Graduate Advisor, who is the default advisor for all students without a research advisor, shall approve all such outside course choices and provide documentation for the student file on the approved courses and their rationale.
Students who wish to take courses in the social sciences, humanities, or professional schools must submit a detailed plan of study that must be approved by the Physics and Astronomy Graduate Committee. Please note that while these unique plans involving non-SEM fields will be considered, there is no guarantee that the plan of study will be approved.

Suggested Course Schedule

A sample academic schedule for a student who has a half-time teaching or research assistantship during the first four semesters is shown below. It includes the core courses for admission to preliminary candidacy and a set of lecture courses that meet the Ph.D. course requirements. It is the schedule for a full-time resident student with the normal preparation described above and who is working toward the Ph.D. degree. Students admitted with less preparation may begin with less advanced courses. Only courses numbered 500 and above carry graduate credit.

The electives listed below, e.g. 741, 781, 795, 911, are purely an illustrative option. Students have the freedom to choose which non-required courses satisfy their elective requirements. Note that this sample schedule may also not apply for a student pursuing a more multidisciplinary plan of study.

Incoming students meet with the Departmental Graduate Advisor before enrolling to decide on their individual schedules. The schedule below is only a sample and may differ depending on the outcome of this advising session. Not all courses may be offered in the given semester.

First Semester

Courses	Credits
702 Pedagogy (*if GTA)	1
711 Quantum Mechanics I	3
717 Graduate Seminar	1
719 Problem Solving	1
821 Classical Mechanics	3

Second Semester

Courses	Credits
703 Grant Writing	1
719 Problem Solving	1
811 Quantum Mechanics II	3
815 Computational Physics	3
831 Electrodynamics I	3

Third Semester

Courses	Credit
781 Solid State Physics	3
931 Electrodynamics II	3

Fourth Semester

Courses	Credit
795 Space Plasma Physics	3
871 Statistical Physics I	3

Preliminary Candidacy

To be admitted to preliminary candidacy, each graduate student must satisfy the following departmental requirements:

1. Within 12 months of entering the program the student must fulfill the requirements of the individualized plan of study for all graduate degrees to certify an undergraduate knowledge of Physics. Visit the Department's website for more information on those requirements and the process of certification.
2. Achieve a minimum core course grade point average of 3.2. The core course GPA is computed based on the following equally weighted elements:

    a. Grade obtained in PHSX 711 Quantum Mechanics I
    b. Grade obtained in PHSX 811 Quantum Mechanics II
    c. Grade obtained in PHSX 821 Classical Mechanics
    d. Grade obtained in PHSX 831 Electrodynamics I
    e. Average grade of 2 other PHSX lecture courses numbered 700 or higher, excluding PHSX 815 (computational physics) and PHSX 717 (graduate seminar).

3. Students may repeat any of the core courses (PHSX 711, PHSX 811, PHSX 821, and PHSX 831) once for the purpose of improving the core GPA. In calculating the core GPA, the Department will use only the better of the two grades.
4. The three additional 700 level or higher lecture courses ("c" under course requirements) must be taken at KU, but students entering with graduate credit from other institutions may petition the Graduate Committee for a waiver for any of the 4 named core courses ("a" under course requirements). For the purposes of the core GPA, grades (of "B+" or better) from the previous institution may be used for at most 3 of the 4 named courses.
5. Graduate students are normally expected to complete all core courses by the end of their second year of enrollment.

Decision on Preliminary Candidacy

Once requirements for Preliminary Candidacy have been met, the Graduate Committee will decide whether to admit the student to Preliminary Candidacy. Once requirements for Preliminary Candidacy have been met and confirmed by the Graduate Committee, the Graduate Committee Chair will report this result to the Graduate Faculty.

Research Skills and Responsible Conduct of Research

Before being able to schedule the comprehensive exam, the student must complete the Research Skills and Responsible Conduct of Research requirements. The University requires that every doctoral student receive training in responsible scholarship pertinent to the field of research and obtain research skills pertinent to the doctoral level of research in their field(s). The Research Skills requirement can be satisfied with a B or better grade in a non-core, physics or astronomy graduate course that covers material (i.e., skills) appropriate for

the research specialty of the student. The course shall be chosen in consultation with the student's advisor, who will inform the graduate coordinator. The course will typically be an elective course. The default option for satisfying this requirement will be PHSX 815, unless the student elects to use another eligible course in its place.

Example courses (not an exhaustive list), are:
PHSX 815 Computational Physics
PHSX 741 Nuclear Physics I
PHSX 761 Elementary Particles I
PHSX 781 Solid State Physics I
ASTR/PHSX 793 Physical Cosmology
ASTR 792 Topics in Advanced Astrophysics
PHSX 795 Space Plasma Physics

The Responsible Conduct of Research requirement is satisfied via completion of PHSX 717, Graduate Seminar.

Pedagogical Instruction

Every student who receives a GTA appointment will be required to complete PHSX 702 at the first offering of the course starting with the semester of the student's initial GTA appointment. Failure to complete this class at the first opportunity may affect consideration for subsequent GTA appointments. PHSX 702 is only offered in the fall semester.

Comprehensive Examination

After completing a major portion of the required course work and satisfying the Research Skills and Responsible Conduct of Research requirement, the student must pass the comprehensive examination within 3.5 years of admission. Failure to meet this timeline for the comprehensive exam requirement is considered a lack of progress toward the degree which may result in a loss of good academic standing and jeopardize continued financial support.

The department requires at least five people to be members of the Dissertation Committee. The committee for the comprehensive oral examination must adhere to the requirements outlined in the Doctoral Student Oral Exam Committee Composition and Graduate & Postdoctoral Affairs Representative on Doctoral Exam Committees policies. While committee membership should be determined in consultation with the student, graduate units have the final determination on questions of committee membership consistent with the established KU policy. These names are submitted to the Division of Graduate Studies, which makes the final appointments. The committee should be chaired by the student's research advisor. By serving as the Chair, this person agrees to supervise the student during their dissertation research. Requests to take the examination must be made to the Graduate Coordinator at least three weeks in advance of the date of the examination. Please also see the College requirements for the Comprehensive Examination.

As a written component of the exam, the student will write a 2,000 to 4,000 word paper on a topic in their chosen sub-field that is relevant to their thesis work. This paper must be presented to the committee at least one week in advance of the scheduled oral exam. The

student will make a presentation at the oral examination based upon this paper and will be examined on the contents of the talk, the paper, and works listed in the paper's bibliography. The bibliography must include at least one recent article from a peer-reviewed journal not authored by the student or the student's advisor. In addition, the committee may ask questions at the oral examination that cover the entire field of physics plus any related material (such as mathematics or chemistry) considered relevant by the examining committee.

In order to pass the comprehensive exam, the student must receive passing grades on both the written and oral components of the exam. The overall grade on this examination, determined by the examining committee, will be "Honors," "Satisfactory," or "Unsatisfactory." If the student receives a grade of Unsatisfactory, the comprehensive exam may be repeated on the recommendation of the degree program, but under no circumstances may it be taken more than two (2) times.

Comprehensive Exam Checklist

The checklist will be filled out after the comprehensive exam and retained as a part of the student's records. The student's thesis advisor will discuss the results with the student. For an example checklist, please see the template located here (PDF).

Post-Comprehensive Requirements

Upon passing the comprehensive examination, the student becomes a candidate for the Ph.D. degree. Each candidate must complete a research project that has been approved by the dissertation committee. The committee establishes the candidate's course requirements and directs the research.

At least once each year after passing the comprehensive examination, the student must schedule a meeting with his or her dissertation committee to discuss progress towards the completion of the dissertation and any other concerns.

Post-Comprehensive Enrollment

Upon passing the comprehensive examination, the student becomes a candidate for the Ph.D. degree. The student and the student's advisor will then designate the candidate's dissertation committee based on the recommendation of the Department. Each candidate must complete a research project that has been approved by the committee. The committee establishes the candidate's course requirements and directs the research.

The candidate must adhere to the University's post-comprehensive enrollment guidelines as explained in the Doctoral Candidacy policy to be eligible for graduation. Any deviation from this policy may result in the student not being able to graduate unless an additional petition is submitted and approved at least three weeks prior to the intended date of the dissertation defense.

GTA/GRA Post-Comprehensive Enrollment

The post-comprehensive enrollment guidelines also apply to students with GTA/GRA/GA appointments. The only difference is that these students must be certified to drop their

enrollment levels. The paperwork for this certification should be submitted at least one month prior to the beginning of the semester in which the student intends to reduce enrollment below full-time. The Graduate Coordinator will submit this paperwork on behalf of the student and will notify the student upon approval.

Regular & Timely Feedback from Thesis/Dissertation Advisors and Department

To ensure academic success and professional growth, all graduate students will receive regular and timely feedback on their research and coursework. Within the first 12 months in the graduate program, students must establish an individualized plan of study with the Department Graduate Advisor. Progress is monitored through an annual report submitted to the Graduate Coordinator. These reports are evaluated by the Graduate Student Evaluation Committee or the student's research advisor. Doctoral candidates are further encouraged to meet with their dissertation committee every 12 months, with their research advisor providing formal evaluations of their annual progress to ensure consistent mentorship through the final stages of the degree. To further support these positive mentoring relationships and the objective evaluation of progress, the student, research advisor, or Director of Graduate Studies may request the completion of a formal mentoring agreement at any stage of the degree. Additionally, the graduate leadership faculty meets each semester to review student progress in detail. This review, combined with the evaluation process, allows for timely intervention if a student needs assistance. After the review, each student and their advisor receive a status letter outlining their progress and identifying any areas for improvement. This letter provides a comprehensive look at the student's progress to date, including remaining coursework, milestones, program requirements, and funding. During the final thesis or dissertation phase, advisors and committee members should follow a 4-week suggested turnaround for reviewing the complete draft and communicating their approval. This ensures students receive the timely feedback necessary to finalize their document and schedule their oral defense with the university.

Dissertation Defense

The dissertation defense, or final oral examination, will proceed according to the Doctoral Degree Final Oral Exams policy maintained by the Office of Graduate and Postdoctoral Affairs.

We refer to these requirements below, as they appeared on September 24th, 2010, and we have inserted some modified requirements for those students who wish to pursue a more multidisciplinary dissertation topic.

It is the responsibility of the student to make sure that all University and Departmental requirements are satisfied.

Completion of the dissertation is the culminating academic phase of a doctoral program, climaxed by the final oral examination and defense of the dissertation. In all but the rarest cases, tentative approval of the dissertation is followed promptly by the final oral examination. Students must deliver their complete dissertation (PDF is acceptable) to their committee at least one calendar week before a final defense can be scheduled with the University. After each committee member agrees that the dissertation is essentially complete, a final defense can be scheduled. Lack of a committee member's response is considered to be implicit approval. This process will be fully monitored by the Graduate Coordinator. Once committee approval has been granted, the final defense must be

scheduled with the Graduate Coordinator, though it is the responsibility of the student to find a date and time which will work for all Committee members. This requirement must be made in advance of the desired examination date by at least the period specified by the Graduate Division (normally a minimum of **three weeks**). The submission of the request must allow sufficient time to publicize the examination so that interested members of the university community may attend. At least five months must elapse between the successful completion of the comprehensive oral examination and the date of the final oral examination.

The committee for the final oral examination must follow the guidelines of the Doctoral Student Oral Exam Committee Composition policy. In addition, the Chair of the committee and three of the other four members must have appointments of some type within the Physics and Astronomy department. The final member must satisfy the requirement established in the Graduate Studies Representative on Doctoral Exam Committees policy. Deviation from this policy may be allowed in special circumstances. Special circumstances will be determined on a case by case basis, and must be petitioned at least THREE weeks before the intended examination date, though more notice may provide a better chance to get the petition approved in time.

For students (and only those students) who are pursuing a multidisciplinary plan of study -- as defined by their substitution of courses from other departments for PHSX electives as described in the Course Requirements section -- up to two members of the committee, including the one required external member, may be faculty from other SEM departments with regular, adjunct, or courtesy appointments at KU. The committee chair must have an appointment of some type within the Physics and Astronomy Department. (Exception: if the primary appointment of the Chair is outside the department, then only one additional committee member may be outside the Department of Physics and Astronomy.) NOTE: It is assumed that these research projects may involve interaction between physics and one or more other SEM disciplines; therefore, the external faculty members may come from up to two different departments.

The College Office of Graduate Affairs ascertains whether all other degree requirements have been met and if reports of any previously scheduled final oral examinations have been submitted and recorded. Upon approval of the request, the final oral examination is scheduled at the time and place approved by the Dissertation Committee. This information must be published in a news medium as prescribed by the Graduate Faculty. Interested members of the university community are encouraged to attend these examinations.

For every scheduled final oral examination, the department reports to the Graduate Division a grade of Honors, Satisfactory, or Unsatisfactory for the candidate's performance. If an Unsatisfactory grade is reported, the candidate may be allowed to repeat the examination on the recommendation of the department. Please see the guidelines for assigning a grade of pass with HONORS (Approved April 2013).

The dissertation acceptance page must be signed by the committee chair before the Graduate Coordinator approves the Application for Graduation. This signature will be the indication that the dissertation and any revisions are satisfactory. All revisions must be completed by the date indicated on the signed Exam Outcome Form. This date must be within a 6-month period following the oral exam.

Students must successfully submit their revised dissertation within the stated period. If they fail to do so, the minimum number of credit hours in which they must enroll to remain a full-time student will be increased from one to three.

See the KU policy library for a comprehensive guide on policies and procedures.

Dissertation Defense – Pass With Honors

The following are Proposed Guidelines for a Pass with Honors for the Ph.D. Final Defense (Approved April 2013)

The award of a Pass with Honors for the Ph.D. defense is the decision of the Ph.D. committee. Currently the criteria used are entirely at the discretion of the committee. The following guidelines are intended to help standardize this decision in the department.
The following elements will generally all need to be present when granting a Pass with Honors.

1. Original research with a publication record.
2. Overall well written and presented thesis. Using the department's "Written Communication Learning Outcomes," the student should have a score of at least "very good" in each of the six written communication learning categories from a majority of the committee members. These categories are:
    1. Introduction/Statement of the Problem
    2. Grounding in the Literature
    3. Methodology/Approach
    4. Results/Analysis
    5. Discussion/Conclusion
    6. Quality of Writing
3. The student should be perceived by the committee to be in the top quartile (25%) of defending Ph.D. students in the department
4. The decision to grant Honors should normally be the consensus of at least four of the committee members.

A decision of Pass with Honors reflects a very good oral presentation and defense indicating detailed understanding of the thesis and related issues and the ability of the student to think and communicate well on their feet.
The committee is requested to write up a brief paragraph to serve as a summary statement outlining their rationale for awarding Honors.

Department Resources

Course Substitutions

Students can petition the Graduate Committee to have redundant course work count towards their degree. Petition forms are available in the appendices or by emailing the Graduate Coordinator.

Colloquia

Colloquia are typically held weekly during the fall and spring semesters. Please refer to the colloquium calendar for dates, location, and speaker information. Please refer to the course requirements section of the handbook for details on the attendance requirement.

Computing Resources

The department has access to a server maintained by the Center for Research Computing. There are $HOME, $WORK, and $SCRATCH spaces and descriptions are available on CRC's Storage webpage. For access information please see the Access Request Form through CRC.

Conference Rooms

Students can reserve conference rooms in Malott Hall (rooms 2055, 3005, and 6051) for exams and general use. If you would like to reserve one of these rooms, please speak with any of the office staff located in Malott Hall, room 1082.

Poster Printing Information

The preferred vendor for poster printing is Jayhawk Ink at the KU Bookstore in the Kansas Union. The Department has an account to which your poster can be charged. Jayhawk Ink does not invoice the Department for posters printed, so it is vital that you deliver the receipt you will receive when you pick up your poster. Please make sure your name is on the receipt before submitting it to Kristin for payment. If you need a service that is not provided by Jayhawk Ink, such as lamination, please contact Kristin Rennells for other printing options.

Travel Information

The Department has set up a SharePoint site called Physics & Astronomy Travel Information, which active graduate students can access. This site houses all of the documents related to travel planning and reimbursement. These documents are updated regularly, so please refer to the site to ensure you have the proper forms and instructions.

University Policies and Degree Requirements

This section contains information on requirements and policies of the Office of Graduate & Postdoctoral Affairs, hereafter referred to as "the University". It is not a complete list of all policies pertaining to graduate students. Only those policies that *most commonly* affect graduate students are included.

Policies are described in general terms and are intended to help students understand what is expected. They do not reflect the exact language of the official policy and should not be confused with official policy. Specific information and restrictions as well as links to relevant forms may be accessed by clicking on the policy headings. Links to the official policies in the KU policy library are found at the bottom of each policy description. Students are accountable to and should familiarize themselves with the University's official policies.

GENERAL POLICIES

The following University policies apply to ALL graduate students regardless of degree, program, or department. These are minimum general requirements. Your department or program may have more restrictive policies in any of these areas.

Admission

Degree or non-degree seeking applicants must have a bachelor's degree (as evidenced by an official transcript from the institution where the degree was obtained).

Related Policies and Forms:

- Admission to Graduate Study

English Proficiency Requirements

The University requires all applicants, international or domestic, to demonstrate English proficiency for admission to any graduate program at KU. There are multiple ways to prove English proficiency:

- Declaration of native or native-like speaker status on the online application for graduate study.
- Official scores from an English proficiency standardized test (e.g. TOEFL, IELTS-Academic, or PTE), sent by the testing agency to the University of Kansas. Official scores must be less than two years old. Scores must be reported to KU directly by the testing service. Self-reported scores or unofficial scores are not accepted. TOEFL scores should be sent by ETS to KU institution code 6871. IELTS should be sent to KU Graduate Admissions via the e-delivery service. PTE score sheets containing the Score Report Code and Registration ID should be emailed to graduateadm@ku.edu for verification.

- Graduation with a baccalaureate degree (or higher) earned in residence from an accredited English-medium college or university or an accredited college or university in the United States. Degrees earned online may not be used to verify English proficiency. Note: this option is not sufficient for employment as a Graduate Teaching Assistant.
- AEC Curriculum: Students who haven't taken one of the listed tests may complete coursework through the KU Applied English Center (AEC) to demonstrate English proficiency.
- US Military Employment: If you are employed as an officer in the U.S. military with documentation of selection or promotion to the rank of Major or higher (or the equivalent U.S. Navy or Coast Guard rank), then you will be considered fully proficient and will not be required to complete AEC testing.

Additional English Competency Requirements for GTAs:

English proficiency requirements for GTAs are governed by the Kansas Board of Regents and must be met separately from the English proficiency requirement for admission to a KU graduate program. Detailed information on English proficiency requirements for GTAs may be found on Graduate & Postdoctoral Affairs' Spoken English Competency page.

Related Policies and Forms:

- English Proficiency Requirements for Admission to Graduate Study
- Spoken English Language Competency of Faculty and Graduate Teaching Assistants, Kansas Board of Regents Policy

Enrollment

For graduate students, advising on enrollment and course selection take place at the department level. While individual units may have additional enrollment requirements, for students who are required to enroll full-time (e.g. students holding a GTA/GRA/GA appointment, international students on an F-1 or J-1 visa, students receiving federal financial aid, etc.) the University defines full-time enrollment as follows:

Fall and Spring semesters:

- Enrollment in 9 credit hours;
- Enrollment in 6 credit hours plus a GTA, GRA, or GA appointment, regardless of percentage of appointment;
- Enrollment in 6 credit hours for graduate students using the Montgomery GI Bill – Active Duty (MGIB-AD) and Post-9/11 GI Bill – Active Duty;
- Doctoral candidates enrolled in dissertation hour(s). *See Doctoral post-comprehensive enrollment.
- Enrollment in 6 competencies for students in a Competency-Based Education (CBE) program

Summer sessions:

- Enrollment in 6 credit hours;
- Enrollment in 3 credit hours plus a GTA, GRA, or GA appointment, regardless of percentage of appointment;
- Enrollment in 3 credit hours for graduate students using the Montgomery GI Bill – Active Duty (MGIB-AD) and Post-9/11 GI Bill – Active Duty;
- Doctoral candidates enrolled in dissertation hour(s).
- Enrollment in 6 competencies for students in a CBE program

Graduate students are not normally permitted to enroll for more than 16 hours a semester or more than 8 hours in summer session.

While these are KU's definitions of full-time enrollment, other institutions may have different definitions. Be sure to consult with your financial aid and/or health insurance providers before making enrollment decisions.

Students not enrolled by 11:59pm the day before the first day of classes will be assessed a late enrollment fee. The University Registrar then deactivates the KU ID of any student not enrolled by the last Friday in October (for Fall) or last Friday in March (for Spring). Students who wish to enroll after that must submit a Permit to Re-Enroll to be reactivated.

Students who wish to leave their graduate program should inform the department of such plans in writing so that a Voluntary Withdrawal form may be submitted on their behalf. Please note that voluntarily withdrawing from your program does **not** automatically withdraw you from coursework. You must also withdraw from all classes in Enroll & Pay via the "Withdraw from the University" option.

Deadlines for adding, changing, dropping, or withdrawing from all courses, as well as any fines associated with the change, are set by the University. **Deadlines vary from year to year. Students should carefully review the current Academic Calendar.**

You may also wish to consult the Registrar's page on Effects of Dropping or Withdrawing on your Transcript.

Your graduate program coordinator (or similar title) is available to guide you through any enrollment scenarios or questions that come up. In order to avoid problems on your record, please consult with them prior to dropping or changing enrollment.

Related Policies:

- Discontinued Enrollment
- Enrollment
- Full-time Enrollment for Graduate Students
- Graduate Coursework Expiration Dates
- Master's Degree Requirements

Graduate Credit (Including Transfer Credit)

The University's Graduate Credit policy defines KU's conditions for the following:

- Definition of graduate credit for the purposes of a course "counting" towards a graduate degree or graduate certificate at KU;
- Transfer of graduate credit to KU from an outside institution;
- Reduction in the required number of graduate hours for Master's students;
- Counting credit hours taken as non-degree seeking student towards a later graduate degree at KU;
- Counting credit hours taken as a certificate seeking student toward another graduate degree.

Transfer Credit

The transfer credit option allows master's students to add graduate-level coursework completed at another institution to their KU transcript to count toward their KU degree. Upper-level coursework taken as an undergraduate, even courses numbered at the graduate level, is not eligible for transfer in any case. Additional restrictions apply to non-KU graduate courses and the number of credit hours that can be counted toward a KU master's degree, so students should carefully review the information provided in the link above and the related policies below, as well as consulting with their DGS. In all cases, transfer credit must first be approved at the department or program level. To begin the transfer process, students should consult with their DGS to submit the required transfer materials. These include a transcript reflecting the courses to be transferred and descriptions and/or syllabi for the courses in question.

No transfer of credits is allowed for the Ph.D. In circumstances where students enter the Ph.D. program with an M.A. from another institution or other relevant graduate coursework, it may be possible for students to request a reduction in the number of hours required for the Ph.D. Students should consult with their DGS about their enrollment plan.

Reduced Credit Hour Degree

KU policy defines 30 hours as the minimum for master's degrees. Departments may petition for a reduced hour master's degree for individual students in cases where they may provide evidence that the student entered the program especially well-prepared to complete a graduate-level degree and the student is able to maintain a superior grade point average. Reduced credit hour degrees must be based on coursework or experiences that can be objectively measured, such as coursework or qualifying internship or study abroad programs. Professional or life experience does not qualify. A reduction in hours is distinct from a transfer of credit and is reserved for students whose prior coursework doesn't qualify for transfer credit (e.g. was already used to fulfill requirements towards a completed degree) and there are no modifications on the transcript.

Restrictions apply to the number of credit hours that can be reduced for a master's degree, so students should carefully review the information provided in the link above and the related policies below.

In all cases, a reduction in hours must first be approved at the department or program level, so to begin the process for approval, students should consult with their DGS. Students must also provide documentation of the coursework or experience being used to justify the reduced hours (e.g. transcripts, program descriptions).

Because there is no minimum number of required hours for the Ph.D., reduction of required hours based on prior degrees or experience is determined solely at the program level. Doctoral students should consult with their DGS about their enrollment plan.

Related Policies:

- Graduate Credit
- Co-enrollment
- Master's Degree Requirements (on Reduced Hour Master's Degree)

Credit/No Credit

The University supports and encourages interdisciplinary study, which may include graduate students enrolling in coursework at the graduate level that is outside of their primary discipline. The Credit/No Credit (CR/NC) is an option for graduate students who are taking a course that is not required for their degree or certificate and who do not wish to have the course grade reflected in their cumulative graduate GPA. Rather than a grade appearing on the transcript, the student receives a designation of CR or NC, which does not factor in the GPA.

No course graded CR/NC will count toward the satisfaction of any graduate degree or certificate requirement. This includes, but is not limited to, courses taken to fulfill the Research Skills and Responsible Conduct of Research requirement for doctoral students.

Students make the CR/NC election via the Registrar's CR/NC online request form. Elections and changes to elections can only be made during the specific CR/NC period. For regular semester courses, this period begins after the last day to add a class and extends for approximately two weeks. Exact dates may be found on the current KU Academic Calendar. Please keep in mind, short courses may have alternate dates.

The student should consult with their own program advisor about the appropriateness of the course prior to enrolling; however, in cases where CR/NC is elected, the course instructor is not informed of the election unless the student chooses to share this information.

Additional restrictions apply. Students should carefully review the information in the link above.

Related Policies and Forms:

- University Senate Rules and Regulations (USRR), Section 2.3.8

Probation & Dismissal

Probation is an academic status that can be assigned to a graduate student who is not making satisfactory progress toward completing their degree. The department initiates the probation process and will inform the student of why they are not making satisfactory progress, what they must do to return to good standing, and the deadline for doing so.

Students are most commonly placed on probation due to their graduate cumulative GPA dropping below a B average (3.0 on a 4.0 scale). In these cases, on the student's record for the semester following the semester in which the student's GPA drops below 3.0. If the student's cumulative GPA is raised to 3.0 by the end of the probationary semester, the student will be automatically returned to good academic standing.

Individual Schools/the College may set more stringent GPA requirements.

Students may also be placed on probation by their departments for other reasons that constitute a failure to make satisfactory progress towards degree. These may include, but are not limited to;

- Lack of progress on the thesis, dissertation, or capstone project
- Unacceptable academic performance on program milestones outside of coursework (e.g. exams)
- Unsatisfactory grades or GPA within foundational required courses (despite the overall cumulative GPA)
- An unsatisfactory result in their department's annual progress evaluation

Nearing or going beyond their maximum time to degree. See the Time Limits section below for more information.

Students should carefully review the Good Academic Standing policy for graduate students at KU for more information on what constitutes making satisfactory academic progress.

Individual programs may also have additional measures of progress. Students should also consult the Annual Review section of their department graduate handbook or the degree requirements section and with their program advisor for more information.

If a student is unable to raise their cumulative GPA or otherwise meet the communicated terms of the academic probation, the department will reconsider their continuation in the program, and in most cases will recommend the student for dismissal. Once dismissed, a student is no longer able to be enrolled in coursework and cannot complete their degree. Students dismissed from any graduate program may not be admitted to any other graduate program at the University of Kansas.

A student on probation or facing dismissal should discuss their status with their advisor.

Related Policies:

- Academic Probation
- Dismissed Enrollment
- Good Academic Standing policy

Grading

The Office of Graduate & Postdoctoral Affairs' (GPA) Grading policy governs requirements for the grading of graduate students above those described in Article II of the University Senate Rules and Regulations. Additionally, individual schools, departments, or programs may have grading policies that are more stringent than those of GPA.

Students should also consult their advisor and the departmental grading section of this handbook for additional information that may affect them.

At minimum, for all graduate students at KU, at least a B average is required on course work counted toward any of the master's degrees at KU, and only courses graded A, B, or C (excluding C-) may be counted. Course work counted toward a doctorate, including that for a master's degree if obtained at KU, should average better than a B.

Related Policies:

- University Senate Rules & Regulations
- Grading
- Academic Probation
- Dismissed Enrollment

Time Limits

The University expects that a master's degree should typically be completed in two (2) years of full-time study, the doctorate degree in five (5) years of study, and both the master's and doctorate together in six-seven (6-7) years of study.

Students who anticipate exceeding these targets should review the information in the policies below, as well as consult with their program advisor to create a timeline for degree completion. In order to support this process, students are encouraged to use a Mentoring Agreement Template and/or adapt the template to their own needs to support effective mentoring and a positive mentoring relationship.

Note that individual schools/the College/degree programs may require Mentoring Agreements for students who are nearing their maximum time to degree.

Related Policies and Forms:

- Master's Degree Program Time Constraints
- Engagement and Enrollment in Doctoral Programs
- Doctoral Degree Comprehensive Oral Exams (on exam expiration and recertification)
- Doctoral Program Profiles with Time to Degree Information
- KU CLAS Mentorship Agreement Template
- Univ. Michigan Rackham Graduate School Mentoring Plan Templates
- KU Graduate & Postdoctoral Affairs IDP template

Leave of Absence

In exceptional circumstances (e.g. cases of illness, emergency, financial hardship, military leave, to pursue family responsibilities, or to pursue full-time activities related to long-range professional goals) it may be necessary for graduate students to take a break from their program temporarily, without having to withdraw entirely from the program. An approved leave of absence allows a student to take a temporary break from enrolling in graduate coursework while remaining in good standing with the University and the department and while "stopping the clock" on their time to degree. When a student is on Leave of Absence status it is understood that they have temporarily suspended their graduate work and therefore will not make use of University resources, including faculty time.

Requesting a Leave of Absence is done through a University petition. University petitions must first be approved and supported at the program level, so students wishing to initiate the petition process should first consult with their Director of Graduate Studies and review their department's internal petition procedures. Units or the Director of Graduate Study may request documentation to support the student's need for a leave of absence.

In order for a Leave of Absence to be approved, the student must be withdrawn from all active and/or future enrollment. Withdrawal for the purposes of Leave of Absence is still subject to all Registrar deadlines, required forms, and applicable tuition and fees.

Students on Leave of Absence are automatically reactivated after their leave is over and are eligible to enroll for their intended semester back during the normal enrollment periods. See the KU Academic Calendar for exact dates that enrollment begins.

If at any time plans change and a student wishes to return and enroll before leave was supposed to end, they may contact their department to be reactivated early.

Related Policies and Forms:

- Leaves of Absence (policy)
- Leave of Absence (GPA website, form linked at bottom of page)

Required University Milestones

All graduate students must complete one or more exams as part of their degree requirements. In addition to department or program guidelines, the following milestones are required for all students and specific regulations apply:

- Master's Final Culminating Exam (written or oral)/Thesis Defense for Master's degree
- Doctoral Comprehensive Oral Exam
- Doctoral Final Exam/Dissertation Defense

*A final culminating effort is not required for departments with an approved coursework-only master's degree option in the Academic Catalog (note that programs with a capstone are considered coursework only).

Before a student is allowed to complete any of these three exams, pre-approval from the school/College is required in advance of the exam date. This pre-approval request will be submitted on the student's behalf by their department after the exam date has been

scheduled. The school/College reviews the student record and verifies all University requirements have been fulfilled. The full list of these requirements may be found via the link in the heading above. Students should work with their departments well in advance of their planned exam date, to schedule their exams in a timely fashion and to ensure that all University policies relating to oral exams are being followed.

There are additional policies and requirements for oral exams. The following are University policies pertaining to oral exams:

Oral Exam Committee Composition

All voting committee members must be appointed members of the Graduate Faculty of KU. Additionally, a majority of committee members serving on a graduate student oral examination committee must be tenured/tenure-track faculty in the candidate's department or program of study.

Many additional restrictions apply, especially for doctoral exam committees. Master's and doctoral students should carefully review the University policies pertaining to exams, as well as consult with their Director of Graduate Studies when forming an exam committee. Your graduate program coordinator can assist with confirming the qualifying status of any faculty member at KU, or outside of KU.

Oral Exam Attendance

Oral Exams may be conducted in-person, remotely, or a hybrid of both. There are no University level requirements for physical presence; however, there are strict regulations on participation.

In all cases, all committee members must be present, either physically or via phone/video conference, for an exam to commence. **If a committee member does not arrive or appear, the exam may not begin and if a committee member leaves or loses connection such that they cannot fully participate, the exam may not proceed. Oral examinations that do not meet these attendance requirements are not valid.**

Master's and doctoral students should carefully review the policies below, as well as consult with their Director of Graduate Studies in the formation of an oral exam committee.

Related Policies and Forms:

- Master's Student Oral Exam Committee Composition
- Doctoral Student Oral Exam Committee Composition
- Oral Exam Attendance
- Graduate Faculty Appointments

DOCTORAL DEGREE REQUIREMENTS

In addition to the student's individual Ph.D. program's degree requirements, the following are University requirements for graduation with a Ph.D. at KU.

Enrollment Requirement

Prior to the semester in which the comprehensive exam is held, all doctoral students must complete a minimum program engagement equivalent to two full-time semesters. This may be accomplished through either of the following:

- Two semesters (fall and/or spring) of full-time enrollment in KU coursework, as defined by University policy
- At least 18 hours of enrollment in KU coursework spread out over several part-time semesters

Related Policies and Forms:

- Engagement and Enrollment in Doctoral Programs

Continuous Enrollment for Post-Comprehensive Students

During the semester in which the doctoral oral comprehensive exam is completed and each fall and spring semester that follows, doctoral students must adhere to very specific enrollment requirements. These requirements may be different than enrollment requirements prior to the oral comp exam.

Failure to properly comply with the enrollment requirements may cause delays to graduation or additional enrollment requirements to make up what was missed, increasing tuition expenses near the end of your degree program.

To avoid delays or additional costs, you are also strongly advised to meet with your graduate program coordinator the semester before your oral comprehensive exam. Your graduate coordinator will work with you to develop an enrollment plan that meets all policy requirements, while also preventing unnecessary or avoidable fees.

Post-comprehensive enrollment requirements also apply to students with GTA/GRA/GA appointments, but these students must be certified to drop their enrollment levels. Departments are responsible for tracking student enrollment and will submit the certification form on the student's behalf **at least two weeks prior** to the beginning of the semester in which the enrollment will drop below 6 hours. Students who are certified to reduce hours continue to meet the University's definition of full-time enrollment, as well as the enrollment requirements of their employment contract.

Related Policies and Forms:

- Full-time Enrollment for Graduate Students
- Doctoral Candidacy

GRADUATE CERTIFICATE REQUIREMENTS

The University offers a variety of Approved Graduate Certificate Programs to encourage current graduate students to pursue interdisciplinary study, gain a credential for expertise in an outside area of study, or provide an option for a coherent course of advanced study for those not ready to commit to a full degree program. Note that students must be fully admitted to a graduate certificate by the end of the last course that will count to fulfill the certificate. Students wishing to complete the certificate should apply as early as possible.

Students whose interests or career goals may be served by a Graduate Certificate should familiarize themselves with the University's policies relating to Certificate programs (found below) early in their graduate career, in addition to individual certificate program requirements.

Related Policies and Forms:

- Graduate Certificate Programs: Eligibility and Admission Criteria
- Policies & Procedures for Graduate Certificate Programs

GRADUATION REQUIREMENTS (Master's & Ph.D.)

In addition to all program requirements, students planning to graduate must complete all University graduation requirements **prior to the published Graduation Deadline** in a given semester. Students should consult the current Academic Calendar for the published Graduation Deadline, which varies by semester.

Graduate & Postdoctoral Affairs Graduation Checklists (Master's | Doctoral)

These graduation checklists provide a comprehensive list of all University requirements for graduation and should be consulted by every graduating master's or doctoral student as soon as graduation is expected. Submission of the final draft of the thesis or dissertation is done electronically. Students must comply with all University requirements for formatting and electronic submission of the thesis or dissertation. There is no University requirement that students provide a bound or printed copy of the draft.

We strongly encourage students to submit an Application for Graduation as early as possible; ideally prior to the 20th day of classes of the semester they intend to graduate.

GRADUATE & POSTDODCTORAL AFFAIRS FUNDING OPPORTUNITIES

The Office of Graduate & Postdoctoral Affairs (GPA) offers funding opportunities in several different categories. Students interested in applying should direct inquiries to the department's Director of Graduate Studies or to GPA. Some of the available funding includes:

Summer Research Scholarships**:** intended primarily for post-comp doctoral students.

Graduate Student Travel Fund**:** intended for graduate students presenting a paper at a national or regional meeting of a learned or professional society. A student may receive an award (max $750) only once per academic year, with priority given to students who have not received the fund previously. Funds are available on a first-come, first-served basis.

Doctoral Student Research Fund: Designed to support KU doctoral students who need assistance to carry out research that advances progress toward the degree. Applications for this fund are accepted only for a limited time as funding is available. Students are eligible to receive one award from this fund during their doctoral career. Students should check the link above for additional information and restrictions.

Policies Regarding Freedom of Expression on Campus

Kansas State Law (HB2333) requires postsecondary educational institutions in Kansas to publish in their handbooks and orientation programs the institution's policies, regulations, or expectations of students regarding free expression on campus.

Per KU General Counsel, this includes the following two policies:

- KU Public Assembly Policy
- Kansas Board of Regents Statement on Free Expression

Note that the two policies listed above apply to ALL members of the campus community; they are not specific to graduate students.

Appendices

Appendix A: Campus Resources

Table A: Campus Resources

New Arrivals

Watkins Health Services
Counseling & Psychological Services
ADA Resource Center for Equity and Accessibility
Financial Aid
GradSense
Hilltop Child Development Center
KU Card Center (for student identification card)
Information Technology
KU Student Housing
Legal Services for Students
Parking and Transit (for parking permits)

International Students

Applied English Center
International Programs
International Student Services

Individual, Social, & Health Resources

Alumni Association
Career Center
Counseling and Psychological Services
ADA Resource Center for Equity and Accessibility
Emily Taylor Women's Resource Center
Sexuality & Gender
Graduate Student Advisory Board
Student Access Services
Watkins Health Services
Urgent Care Locations
Lawrence Memorial Hospital
Student Involvement and Leadership Center
Center for Community Outreach
Student Union Activities (SUA)

Student Organizations

SACNAS

Academic Services & Resources

Academic Achievement & Access Center
Office of Institutional Opportunity and Access
ADA Resource Center for Equity and Accessibility
Electronic Theses and Dissertations
Enrollment Guide
Hall Center for the Humanities
Institute for Policy & Social Research
Libraries
Office of Multicultural Affairs
Office of Study Abroad Travel Registry
Office of Research
Student Affairs
Writing Center
University Ombuds

Events & Activities

Graduate Student Events
KJHK Radio 90.7
Lied Center
Murphy Hall Theatre
Natural History Museum
Spencer Museum of Art
University Daily Kansan (UDK)
Lawrence Arts Center
Lawrence Public Library
Parks and Recreation
Watkins Community Museum

Veterans/Military Students

Military-Affiliated Student Center
Office of Graduate Military Programs
KU Collegiate Veterans Association
Alliance for Veteran Support
Veterans Upward Bound
Veterans Affairs Eastern Kansas Health Care System, Topeka

Graduate Students of Color

Veterans Affairs Eastern Kansas Health Care System, Lawrence

Appendix B: Community Resources

Table B: Community Resources

Housing
Craig's List for Lawrence
Lawrence Apartments
KU Housing
Realtor information

Employment & Volunteering
City of Lawrence Job Listings
Douglas County Job Listings
Lawrence-Journal World Job Listings
Craig's List of Lawrence Job Listings
Kansas City Star Job postings
Kansas City Non-Profit Companies' Job Listings
Kansas Works
KU Career Services
KU Job Listings
Kansas State Employment Center
American Towns.com Volunteer Search Engine
KU Center for Community Outreach
United Way of Douglas County
Volunteer Match

Schools & Child Care
Hilltop Child Development Center
Douglas County Child Development Association
Lawrence Public Schools USD 947

Local Businesses & News
Lawrence Journal-World Marketplace
Lawrence Journal-World
Lawrence Journal-World
Kansas City Star
Topeka Capital-Journal
University Daily Kansan (UDK)
Unmistakably Lawrence

Government Services
Government of Douglas County
Lawrence Chamber of Commerce
Kansas Department of Revenue
Douglas County Treasurer
Voter Registration for Douglas County

Personal Finance
Money Management Services
Cost of Living Calculator
Budget Calculator
How to Improve Your Budget
IRS Guide to Taxes on Graduate Funding
Loan Repayment Information

Appendix C: Advisor Declaration Form

Advisor Declaration Form

This Advisor Declaration Form is to be signed by both the student and the new advisor. It is the student's responsibility to obtain the required signatures on this form. The completed form should then be submitted to the Graduate Coordinator for record keeping. Should the student need to change advisors, the student will need to fill out an Advisor Termination Form and submit a new Advisor Declaration Form.

Student Name: _____

Student Signature: _____

Date: _____

Advisor Name: _____

Advisor Signature: _____

Date: _____

Start Date (If different from above date): _____

Appendix D: Advisor Termination Form

Advisor Termination Form

The Advisor Termination Form is to be signed by either the student or the former advisor. The completed form should then be submitted to the Graduate Coordinator for record keeping. If the student has reached candidacy, the student will have 4 months from the termination date below to find a new advisor. Once the student has found a new advisor they are required to submit a completed Advisor Declaration Form to the Graduate Coordinator. The new advisor may require the student to retake part of the comprehensive exam. Should the student fail to find a new advisor during the aforementioned 4-month period, the student may be put on academic probation.

Student Name: _____

Student Signature: _____

Date: _____

Advisor Name: _____

Advisor Signature: _____

Date: _____

Termination Date (if different from above date): _____

Appendix E: Course Substitution Form

Department of Physics and Astronomy

Graduate Committee Petition – Course Substitution

Name: _____ Student ID #_____

KU COURSE (and class number): _____

University at which you took class you want to transfer:_____

Course name and number: _____

Instructor: _____

Grade: _____

Date taken: _____

Book used: _____ Chapters:_____

Course description:

Please attach syllabus and any additional information you think may help the committee make its decision.

For questions, contact the Graduate Coordinator.

Appendix F: Comprehensive Exam Checklist

Student Name: _____

Date: _____

Examining Committee Members:

_____

_____

_____

_____

_____

Comprehensive Exam Checklist

Table F: Comprehensive Exam Checklist Rubric

	Unsatisfactory	Basic	Intermediate	Advanced
Description of Research Areas				
Formulation of Hypothesis				
Design of Experiment and Calculations				
Knowledge of General Physics				

Pass: Yes ____ No _____
Honors: Yes ___ No ___

Appendix G: Dissertation Defense – Exam Outcome Form

EXAM OUTCOME FORM

DEPARTMENT OF Physics and Astronomy

Please complete and submit to the departmental graduate secretary immediately following the exam.

Student Name: _____ Student ID#_____

☐ Ph.D. Final Defense

Exam Outcome (circle one): HONORS SATISFACTORY UNSATISFACTORY

☐ Revisions required

Revisions must be completed by the following date, which must be within 6 months of oral defense _____.

Committee Chair: _____

Signature: _____Date: _____

Outside Member/
Graduate Studies Representative: _____

Signature: _____Date: _____

Appendix H: M.S. Defense Checklist

Please return completed form to Graduate Coordinator after the defense. Do NOT include the name of the student defending or the names of the committee members. This information is for program development and will not be kept as part of the student's record.

MS Defense Checklist

Table H: MS Defense Checklist Rubric

	Unsatisfactory	Basic	Intermediate	Advanced
Description of Research Areas				
Formulation of Hypothesis				
Methodology				
Knowledge of General Physics				

Circle one: Pass with Honors / Pass / Fail
Circle one: Fall / Spring / Summer
Year: _____

Appendix I: Ph.D. Defense Checklist

Please return completed form to Graduate Coordinator after the defense. Do NOT include the name of the student defending or the names of the committee members. This information is for program development and will not be kept as part of the student's record.

PHD Defense Checklist

Table I: PhD Defense Checklist Rubric

	Unsatisfactory	Basic	Intermediate	Advanced
Description of Research Areas				
Formulation of Hypothesis				
Design of Experiments and/or Calculations				
Scientific Contribution to the field				

Circle one: Pass with Honors / Pass / Fail
Circle one: Fall / Spring / Summer
Year: _____

Appendix J: Oral Presentation Form

Department of Physics & Astronomy

Oral Presentation Form

STUDENT NAME:_____

DATE:_____

TITLE:_____

VENUE:_____

FACULTY:

Print Name:_____ Signature:_____

FACULTY/Ph.D.:

Print Name:_____ Signature:_____

All graduate students must give a talk with at least one faculty and one Ph.D. doing research in the department every semester that they are enrolled.

Please complete the form and return to the Graduate Coordinator in the department office.