Graduate Student Handbook

University of Virginia

Physics Department

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Foreword

Graduate education is a crucial part of the mission of the Department of Physics at the University of Virginia. Our graduate students play a key role in both our research and teaching efforts, and the students we train go on to serve as leaders in physics and other fields. We strive to challenge students to reach their full potential as research scientists, while at the same time providing the support and resources needed to ensure success. The physics graduate program is guided by the Department of Physics Statement of Values.

This handbook is intended as an overview of the policies and procedures regarding graduate students in the department. The Department of Physics is a member of the Graduate School of Arts and Sciences (GSAS), and follows GSAS policies in most cases. Rules specific to GSAS Academic Regulations can be found in the Graduate Record. Additional policies particular to the department are summarized here. Where clarification or more information is required, students should consult the department's Director of Graduate Studies (DGS).

The department reserves the right to change the policies described here at any time. A version of this handbook is available on the department website at http://www.phys.virginia.edu. The online version may not be the latest. Please consult with the DGS for any policy changes.

I. Programs

Graduate Degree Programs

The department offers three graduate degrees: the Ph.D., M.S., and M.A. Most students are admitted to the Ph.D. program, and the bulk of the information in this handbook is intended for them.

Ph.D. Degree: This degree is the highest degree available in physics, and represents professional preparation for a variety of careers in academic or industrial research, and education. It requires both rigorous academic training and a research project yielding a significant contribution to science. The minimum time required for the degree is three years, but six years is more typical. University regulation places a seven-year limit to the Ph.D. time. Past that time, a graduate student cannot receive financial support from the Ph.D. program anymore (though they may continue to work toward their degree).

M.S. Degree: This degree has requirements similar to the Ph.D., but with fewer courses and a smaller-scale research thesis. It can normally be completed in two years, including summer research. The maximum time that a student can spend towards the MS degree is 3 years. The 3rd year requires approval of the DGS. Approval is not automatic, and must be justified by demonstrated progress, a credible plan for completion, and a clear explanation of the special circumstances that led to extension of the research project.

M.A. Degree: This degree requires several graduate-level courses but no research. It can normally be completed in three semesters, but it can be extended to a fourth semester. Thus, a total of 2 years can be spent for the MA degree, unless approved by the DGS.

Upon completion of the master's degree requirements, a Doctoral student may petition for an en-route degree through formal request made to the Enrolled Students Office with the assistance of the department Graduate Program Coordinator. Information and application deadlines can be found at the GSAS website.

II. Academic Requirements

GPA Requirement (All Degrees)

Students must maintain a cumulative GPA of at least 3.00 in all GPA-eligible graduate-level courses completed while enrolled in the Graduate School of Arts and Sciences. A grade of B- is the lowest satisfactory grade for graduate credit.

Full time status Students must be registered for 12-17 credits each semester to remain in good standing.

Language Classes

All students whose first language is one other than English are required to take an English proficiency exam (the SPEAK test, which comprises an oral part and a written part) administered by the Center for American English Language and Culture (CAELC). Students who have spent substantial time in an English-speaking environment may request a waiver for the exam, but such waivers are seldom granted. The SPEAK test is administered on the week before classes begin in August and students coming from abroad should make sure that they join the University at least one week before classes start, in order to take the SPEAK test.

Based on the exam results, CAELC will recommend a sequence of language courses for the student. Language courses are not graded and are taken in addition to the graduate courses described below. The student must take and maintain good standing in the recommended courses in order to be eligible for financial support as a Teaching Assistant. This is a non-negotiable GSAS requirement. The only exceptions are the courses ESL 901 and 902, which are writing courses designed to help students with their research and thesis. These two courses may be deferred or waived with the approval of the DGS and the student's research advisor.

The department does not have a foreign language requirement for English-speaking students.

Ph.D. Degree

Academic Credit Requirements

Of the 72 credits required for the doctoral degree, students are expected to complete a minimum of 33 credits of graded coursework to include six core courses and five departmental electives. An additional 10 credits of colloquia and research workshops are required and taken during the first and second year. Ph.D. candidates will also take a minimum of 18 credits* of non-topical research in preparation for the final thesis and dissertation. Although not required, additional credits may be earned through approved independent study (PHYS 7995) or by taking additional elective courses.

**Typically, 12 credits of non-topical research are taken each semester after the 2nd year.*

***Course Registration*:** Students register for all courses through the online Student Information System (SIS), at http://www.virginia.edu/sis. The most straightforward listing of courses offered in each term is available through hooslist.virginia.edu (formerly louslist.org, which went dormant in late 2025).

Core Courses – 6 required – typically taken during the first year

The material covered in these courses forms the basis for the qualifying examination. All Ph.D. students must pass each of the core courses with a grade of B- or higher. If a student fails to obtain a B- or higher for a core class, the class in question must be repeated and the student must acquire a passing grade of B- and above. If a student fails two core courses in the same semester, then they cannot continue in the PhD program. A minimum GPA of 3.0 must be maintained in these courses in order to maintain good academic standing. Transfer credits from other graduate programs can be accepted with the approval of the DGS.

Fall Semester, first year

PHYS 7010	Theoretical Mechanics I
PHYS 7410	Electricity and Magnetism I
PHYS 7610	Quantum Mechanics I

Spring Semester, first year

PHYS 7210	Statistical Mechanics
PHYS 7420	Electricity and Magnetism II
PHYS 7620	Quantum Mechanics II

Electives – 5 required

Five elective courses are required. Electives include any graded 5000- or 8000-level physics course. At least two of the five electives must be 8000-level classes. It is recommended to use the 3rd through 6th semesters to satisfy this requirement, however, the Department cannot offer all electives every year and it may be necessary to wait one or two years to take an elective of interest. Regularly offered electives include[1]:

PHYS 5160	Introduction to String Theory	PHYS 5880	Introduction to Quantum Computing

[1] Enrollment for PHYS 5320, listed in the course catalog but not this handbook, is restricted to undergraduate or non-physics graduate students.

PHYS 5170	Introduction to Cosmology	PHYS 8220	Fundamentals of Photonics
PHYS 5190	Electronics Lab	PHYS 8240	Advanced General Relativity
PHYS 5210	Discrete Group Theory for CMP	PHYS 8420	Atomic Physics
PHYS 5240	Intro to Theory of General Relativity	PHYS 8630	Introduction to Field Theory
PHYS 5250	Mathematical Methods of Physics I	PHYS 8640	Modern Field Theory
PHYS 5310	Optics	PHYS 8610	Condensed Matter Physics I
PHYS 5620	Solid State Physics	PHYS 8710	Nuclear Physics I
PHYS 5630	Computational Physics I	PHYS 8750	Elementary Particle Physics I
PHYS 5640	Computational Physics II	PHYS 8880	Quantum Optics & Quantum Information
PHYS 5720	Intro to Nuclear and Particle Physics		

Subject to approval by the DGS, Ph.D. candidates may use one 7000/8000-level elective course from a department other than physics *to count as at most one of the required 5000-level electives*, provided that a similar course is not offered in the department of physics and the course can be proven to be useful to the student's research.

Independent study PHYS 7995 can be used to substitute for one of the required electives with approval of the DGS. Each PHYS 7995 course should be documented with a syllabus, which should include a description of the topics studied, materials used, plan of work or milestones, and method of assessing progress or rubric. To be used as an elective toward a degree, the content and assessment of work for the Independent Study should be judged to be equivalent or comparable to that of an academic graduate course.

Transfer Credit
With the approval of the supervising department and the assistant dean, a Ph.D. student may transfer up to 24 credit hours of coursework earned in another graduate program (and awarded a grade of "B" or higher) toward the 72-hour doctoral requirement. Transfer credits earned prior to matriculation must be requested by the conclusion of the first year of a student's enrollment in the Graduate School of Arts and Sciences. In any case, at least 18 graded course credits applied toward the degree must have been earned at the University of Virginia. If nine or more transfer credits are awarded, the student's date of graduation will be accelerated by one term. If 21 or more transfer credits are awarded, the student's expected date of graduation will be accelerated by two terms.

Qualifying Process

All Physics graduate students must pass the Qualifying Process (Qual) to be eligible for the Ph.D. degree. This is accomplished by demonstrating mastery in the four core areas of fundamental academic physics: Classical Mechanics, Electricity & Magnetism, Quantum Mechanics and Statistical Mechanics. This demonstration of mastery can be accomplished either through high performance in coursework or via passing a summative exam in each core area.

For Electricity & Magnetism and Quantum Mechanics, mastery is demonstrated through the coursework by receiving a course grade of A or A+ in both semesters of the 2-semester sequence in each area (currently PHYS 7410 and 7420 for Electricity & Magnetism and PHYS 7610 and 7620 for Quantum Mechanics). For Classical Mechanics and Statistical Mechanics, mastery is demonstrated through the coursework by receiving a course grade of A or A+ in the 1-semester course covering each area (currently PHYS 7010 for Classical Mechanics and PHYS 7210 for Statistical Mechanics). Following their first year of study, all graduate students' core coursework grades will be evaluated and those needing to take the summative exams in specific area(s) will be identified. Any grade at A- or below in any of these 7000-level courses will necessitate taking the summative exam in that specific core area.

These summative exams will be offered each year in June and August. Students needing to take exams are required to take their first attempt at the exams in the June offering. The four exams for the four core subject areas will be administered independently. Students with test-taking accommodations from SDAC take each subject exam independently but simultaneously with standard administration of the exam.

The summative exams are administered in four distinct parts held over three days. Day 1 covers four (4) problems in Electricity & Magnetism. Day 2 covers four (4) problems in Quantum Mechanics. Day 3 is split into two sessions: Session 1 covers two (2) problems in Classical Mechanics and Session 2 covers two (2) problems in Statistical Mechanics.

A new exam is prepared and approved by the Qualifying Examination Committee for each exam offering. One-half of the problems assigned in each section of the exam are chosen directly from the Qual Study Guide. A review of the Qual Study Guide is undertaken every other September by the Qualifying Examination Committee with the goal of improving existing questions, removing some, and adding some new ones. The problems from the Qual Study Guide will constitute 40% of the weighted exam grade in each area. The remaining problems are new, will constitute 60% of the weighted exam grade, and will subsequently be added to the Qual Study Guide and used on future exams.

All candidates must attend a mandatory meeting held several days before the exams begin. At this meeting, candidates may submit integral tables, tables of physical constants, and paper language [dictionaries or translators] (to be used during the exam) for approval by the Qualifying Exam Committee. The Committee will only consider materials that are submitted at the pre-exam meeting. All approved materials will remain in the exam room and will be available for use by all candidates. With the exception of these pre-approved materials, these summative exams are closed book.

Each subject's exam is independently graded by two faculty members, with the student names held anonymous. The final score is determined in consultation with the full committee. To pass the exam, it is necessary to collect subject waiver(s) through course performance or ≥50/50/50/30 % over the four summative exams any time during the June and August offerings. Put another way: if a student scores ≥50% or obtains a waiver in 3 of 4 subject exams and scores ≥30% in all 4 subject exams, then the student passes the Qualifying Process.

Students not scoring ≥50% on a given exam during the June offering are offered a second attempt to take those subject exams in the August exam offerings. A maximum of two attempts at completing each part of the exam are allowed and no exceptions are granted.

Students who do not pass the Qualifying Process via the second attempt at the summative exams are no longer eligible for a Ph.D. degree but can usually obtain a M.A. degree by completing elective coursework or pursue a M.S. degree by completing elective coursework and a research thesis with the support of a research advisor.

Research

Non-Topical Research: Students working on their dissertation research enroll in non-topical research. At least 18 such credits are required for the Ph.D., but students typically take considerably more. It is the responsibility of the student to obtain permission from the instructor of the non-topical research section before enrolling for that section. Once enrolled, the student must meet with the instructor to arrive at a mutually agreed plan to complete the requirements of the non-topical research course. Failure to do so could lead to an unsatisfactory grade for the course. There are three courses that qualify as non-topical research:

PHYS 8999	For M.S. students
PHYS 9998	For Ph.D. students who have not yet passed the qualifier exam
PHYS 9999	For Ph.D. students who have passed the qualifier exam

***Research Advisor*:** Each student's thesis project will be performed under the guidance of a research advisor, who is the student's primary mentor and guide in the development of research expertise. When selecting an advisor, students should think carefully about their own interests and needs, and have a thorough and open discussion with the prospective advisor about both the student's and the advisor's expectations. Most students are supported through research funds provided by their advisor, so the

expected availability of support funding should be part of that discussion.
Students are expected to make a final selection for a research advisor within the Department of Physics by the end of their second year. Prior to that time, there are opportunities for independent study courses and summer research, so that students can become familiar with the research work. Students who have difficulty finding a research advisor should consult with the DGS, as the department makes a considerable effort to find positions for all students. A student may switch advisors at any time, but should be aware that doing so will generally delay the thesis project.
Students past their second year who are not affiliated with an advisor are considered to be not in good standing. A student in their third year and beyond without a research advisor will be terminated from the program by the end of the semester that the student has stayed without an advisor.

***Research Funding*:** When selecting a research advisor, students should be aware of the level of research funding that is expected to be available. As noted in Section III below, the department can provide financial support to a student for only a limited number of semesters, **no more than 6 semesters**. If research grant funds are also limited, a dissertation project should be chosen that can be completed during the time support is available.

***Seeking Advisors Outside the Department*:** Only physics faculty or affiliated faculty members are permitted to serve as a research advisor for a physics student. In rare cases, with approval of the DGS and the Graduate Program Committee, a student may be jointly advised by a faculty member outside the Physics Department and a Physics faculty member serving as a formal advisor. In such a case, departmental support for a student will be limited to 4 semesters.

***Research Advisory Committee*:** The research progress of each Ph.D. student is monitored by a research advisory committee. The committee consists of the research advisor, a departmental representative, and a third faculty member of the student's choice. The departmental representative is appointed by the DGS and serves as the committee chair. The Research Committee meets every spring semester, normally starting in the third year of study. At the meeting, the student will discuss research progress and plans for the thesis. The meeting is typically scheduled for one hour, including (roughly) 20 minutes for a student presentation, 20 minutes for discussion of the research, and 20 minutes for discussing evaluations. Evaluations are recorded on a research evaluation form, which the committee chair should return to the department office following the meeting. Research Committee evaluations are used by the department when allocating departmental fellowships and other awards. A poor evaluation may serve as an important warning to the student, but does not in itself jeopardize a student's standing in the department.

The Research Committee meeting must be held **by April 1 of each year** unless another date is announced. A student who otherwise fails to hold a Research Committee meeting on time will be placed on academic probation in the following semester and is eligible to be declared not in good standing.

***Fourth-Year Seminar*:** Each Ph.D. student is required to present a seminar to the department by the end of the fourth year of study. Scheduling arrangements should be made with the listed instructor for the appropriate seminar class. The DGS can approve well-justified requests to postpone the seminar, but a student who otherwise fails to present the seminar on time will be placed on probation and is eligible to be declared not in good standing.

***Time to Degree*:** The Physics Department adheres to the University policy that all graduate students must complete their Ph.D. work (including the thesis defense) within seven years of entering the graduate program. Students entering their sixth year of study will be notified of this deadline and asked to provide a plan of research enabling them to complete their degree by the end of their seventh year. Students entering in the 7^{th} year will be asked to update their plan of research. This plan will be evaluated by their Research Advisory Committee. Concerns raised by the committee about completing the scope of work within the seventh year will require a written response or modification of the plan by the student. A student whose research has been delayed by factors outside of his or her control may submit a request for an extension of study to the Graduate Program Committee. If approved, extensions will typically be granted for no more than six to twelve months of additional time. Once the time limit and any extensions have expired, the student will be considered not in good standing, and thus ineligible for financial support.

Personal events that entail a significant distraction from research may justify an extension of study. Such events could include the birth or adoption of a child, illness of the student or a family member, or time spent out of the country due to visa difficulties. Personal requests should be made at the time of the event, as requests made well after the event may be viewed less favorably. See also Section V below regarding official leaves of absence; time spent on leave does not count toward the time to degree.

Dissertation & Defense

Completed dissertations must be submitted to the department for examination by the dissertation committee. This committee, chaired by the primary advisor, will consist of a minimum of four tenured or tenure-track members of the faculty of the Graduate School of Arts and Sciences. One member of the committee will serve as a representative of the Graduate School of Arts and Sciences to affirm that the student has been assessed fairly and with due rigor. This representative must hold a primary appointment outside of the student's department. This representative may be drawn from the tenured or tenure-track faculty of other graduate schools at the University, but must hold a Ph.D. A DGS may petition to permit a reader from outside the University who holds a Ph.D. to serve as one of the four core members of the committee by providing the associate dean with the reader's CV and a statement regarding the reader's particular suitability for the committee. This external reader may not serve as the representative of the Graduate School. Once these minimum requirements have been met, additional committee members from within the University or other institutions may be added. Through its chair, the dissertation committee may invite other members of the departmental faculty to take part in the examination. The result of the examination and the names of the committee members and their departmental affiliations must be reported to the Graduate School by May 1 for May graduation, August 1 for August graduation, and December 1 for December graduation (or the next business day in the event that a deadline falls on a weekend). No candidate may be admitted to the final examination until the committee has accepted the dissertation and the candidate has satisfied all other degree requirements set by the Graduate School and the department.

A dissertation that has been successfully defended must be deposited with the University's digital repository, LIBRA, by the respective graduation deadline cited above. At the time of deposit, students may elect to make the full content publicly available online or limit access to the contents of the dissertation for up to five years to UVA users who possess valid network access and any member of the public accessing the UVA network on Grounds. Students may also petition the Graduate School for an embargo of the dissertation for up to five years, during which time its contents will not be visible to any audience.

Typical Course of Study:

The course schedule for Ph.D. students in the first two years of study is as follows:

Year 1:

Fall	*Spring*
PHYS 7010 – Theoretical Mechanics I	PHYS 7420 – Electricity and Magnetism II
PHYS 7410 – Electricity and Magnetism I	PHYS 7210 – Statistical Mechanics
PHYS 7610 – Quantum Mechanics I	PHYS 7620 – Quantum Mechanics II
PHYS 5000 – Colloquium	PHYS 5000 – Colloquium
PHYS 9010 – Introduction to Physics Research I	PHYS 9020 – Introduction to Physics Research II
PHYS 5110 – Special Topics (any section)	PHYS 5110 – Special Topics (any section)

Summer (first summer and every subsequent summer): Students do not typically enroll for courses in the summer. It is expected that students will prioritize working on research in each summer.

Year 2: (if all electives are taken that year, which isn't an obligation)

Fall	*Spring*
Elective	Elective
Elective	Elective
Elective or PHYS 9999 – Research (3 credits)	Elective or PHYS 9999 – Research (3 credits)
PHYS 5000 – Colloquium	PHYS 5000 – Colloquium

Fellowship Expectation: Students who are entirely supported by a fellowship are expected to take one additional regular course in each semester that they receive such support. Ordinarily, the additional course is an elective, PHYS 7995 Independent Study, or PHYS 9998 Research (in the first year). Fellowship students should consult with the DGS regarding their options.

Subsequent years:

12 credits of PHYS 9999 – Non-Topical Research in each semester.
Additional Elective courses may also be taken if approved by the Research Advisor and the DGS.

Master's Degrees

Students must complete a minimum of 30 hours of graduate credit. Only graduate courses (5000-level or above) taught by members of the Physics Faculty (or Affiliated Faculty) and graded on the standard A through F scale may be counted toward the graded coursework requirement. Courses applied toward a master's degree in one department may not be used to fulfill requirements for a master's degree in a second department of the Graduate School of Arts and Sciences. Students who previously enrolled in courses offered through GSAS while completing an undergraduate or graduate degree program at the University of Virginia may count up to six credits of such coursework towards a master's degree as long as those credits were not used to fulfill requirements for the prior degree.

No extension, correspondence, home-study, or transfer courses will be counted toward the degrees of Master of Arts, Master of Science and Master of Fine Arts.

A student's particular course of study is arranged in consultation with faculty advisors in the discipline and the DGS. With the approval of his or her advisor, students may elect a limited number of appropriate courses offered in other departments.

Residency Requirement: Master's students must be enrolled in a minimum of two semesters of full-time study.

***Time Limitation*:** All requirements for the master's degree must be completed within three years from the first term of enrollment.

Master of Arts Degree

The M.A. degree requires ten courses (30 credits) in total, including a minimum of four core courses and a maximum of six electives (described above). A coherent course plan for this degree must be approved by the DGS.

Master of Science Degree

The M.S. degree requires eight courses (24 credits), to include the six core classes and two electives as described above. In addition, a minimum six credits of non-topical research are required for a total of 30 credits.

M.S. students must be affiliated with a research advisor after the first year of study. The M.S. degree requires a written thesis documenting the research effort. The thesis will have the same physical standards, and submission requirements, as the Ph.D. dissertation. The thesis must be defended before an oral

examination committee consisting of the research advisor and at least one other faculty member from the Physics Department. The result of the examination and the names of the examiners must be reported by the chair of the examining committee to the Graduate School at least two weeks in advance of final exercises.

III. Financial Support

This section describes general policies for financial support. Exceptions to these policies can be made as the department deems appropriate. Each student awarded departmental support will receive a letter from the department before the beginning of the academic year, detailing the financial support offered for that year. The terms and conditions set forth in the support letter take priority over the policies described here.

Types of Support: All Ph.D. students receive financial support during their studies. Support includes wages or stipend for the 9-month academic year, wages for summer research, tuition, fees, and basic health insurance. Support can either be provided by the department or university ("departmental support"), or by other sources ("non-departmental support"). Departmental support usually takes the form of a teaching assistantship (TA), but can also be a fellowship, gradership, departmental assistantship, or various combinations of these forms.

Non-departmental support can be either a research assistantship (RA) or a fellowship paid by sources external to the university. Students supported by an RA perform research under the guidance of their research advisor. RA support is normally paid by a faculty member's research grant, and arrangements for RA support must be made with a student's research advisor.

Students supported by a fellowship have no formal duties, but are expected to work full time on coursework and/or research.

The academic year wages for RAs and TAs are set by the department within the range defined for all students by the Graduate School of Arts and Sciences. The current wage level can be found on the department web page. Please note that assistantship wages and fellowship stipends are subject to applicable federal and state taxes.

Per university policy, a graduate student who receives a full assistantship normally will not engage in other employment, either inside or outside the University. Graduate students and their advisors may request an exception to this restriction.

TA Duties: Students supported as TAs contribute to undergraduate instruction by supervising lab classes or recitation sections, holding office hours, grading course materials, and similar duties. A maximum of 20 hours per week of instructional effort may be required. Students supported as TAs must prioritize fulfilment of their teaching obligations while supported as a TA, including avoiding absences or travel (even if they are research related) that would interfere with their duties. Absences must be approved in advance by the supervising instructor for the related course(s). TAs are required to attend training sessions organized in the week before the start of each semester.

Departmental Fellowships: The department offers a limited number of fellowships each academic year. Awards are made by the Financial Aid Committee using a range of considerations including course grades, qualifying exam scores, teaching performance, and research committee evaluations. Students may be nominated by a faculty member or may apply for a fellowship themselves. Some priority is given to students who have not received a fellowship previously. Fellowship funding provides flexibility in managing the graduate program, and factors related to programmatic needs will also be considered.

In addition, the department nominates several students each year for various University and external fellowships. Such opportunities are announced as they arise. The department's nominees are selected by the Financial Aid Committee.

External Awards: Students are strongly encouraged to seek funding from external sources to support their research. Such awards confer distinction on the student and can augment the funding available within the Physics Department. A student is eligible to receive fellowship stipend and assistantship wages in combination with externally awarded living support up to a maximum threshold of 130% of the standard living support for the academic year, subject to the terms of the external award and availability of assistantship funding. This living support augmentation is subject to approval of the DGS and Department Chair, and must comply with the policies of the department.

Per GSAS policy, a student who receives an external award is required to report the award to the DGS. Failure to report such an award constitutes misconduct on the part of the student and is subject to disciplinary action.

Summer Support: Summer research stipends are typically derived from research grants. The stipend amount is set by the physics faculty, and can be found on the department web site. First-year students are expected to find a summer research group which is able to support them as a summer student, and will receive department assistance in this placement if necessary. In addition to research funding, a small number of summer TA positions are typically available through the Summer Session Office. These positions are awarded by the Chair of the Summer Session on the basis of teaching performance and seniority.

Tuition and Fees: When students receive any form of financial support, all required tuition, fees, and basic health insurance will be paid as part of that support. The charges for health insurance and non-topical research are paid by the department when a student receives departmental support, and by the research advisor when a student is supported as a RA. If the student receives support from a combination of sources, the charges for health insurance and non-topical research will be allocated in the same proportion as the student's stipend.

Limit on Department Support: Students are expected to obtain non-departmental support (*e.g.* a research assistantship supported by their advisor's research funds) where possible, but the department will, if necessary, provide stipend support to a student in good standing for six academic semesters, typically in the form of TAs. Departmental support for an additional two semesters may be provided as finances permit. Departmental support for more than eight semesters is provided only under exceptional circumstances, as determined by the Financial Aid Committee. Summer TAs do not count toward the limit on departmental support.

Students without Support: Students past their fifth year receiving no financial support through a fellowship, TA, or RA are responsible for their own tuition, fees, and insurance. If all required coursework (including non-topical research) has been completed, the tuition charges can be minimized by registering as a non-resident student.

Master's Students: Students pursuing a terminal Master's degree are ineligible for departmental support. However, a Ph.D. candidate who fails the qualifying exam in August may be offered financial support for the following fall semester so that they can complete a M.A. degree.

IV. Satisfactory Progress and Good Standing

Requirements: Ph.D. students are expected to continually demonstrate satisfactory progress towards their

degree. Satisfactory progress is defined according to the following criteria:

1. As per the Graduate Record, Students must achieve a minimum grade point average of 3.00 during each academic term and sustain a minimum grade point average of 3.00 cumulatively in order to maintain good academic standing. Unsatisfactory performance during a given semester may be considered sufficient reason for a student to be placed on academic probation or asked to leave a program. Hence, students must maintain minimum cumulative and per-semester GPAs of 3.00 in all GPA-eligible graduate-level courses completed while enrolled in the Graduate School of Arts and Sciences. A grade of B- (2.70 grade points) is the lowest satisfactory grade for graduate credit. Seminar and independent study courses are not included in this average.

2. The student must pass all graded and non-graded courses. A grade of C+ or below is not passing, and neither is a mark of Unsatisfactory in a non-graded course.

3. The student must take the Qualifying Examination at a time approved by the DGS, typically following their first two semesters in the program.

4. After the second year of study, the student must be affiliated with a research advisor.

5. Starting in the third year of study, the student must hold a Research Committee meeting each year by the specified time.

6. Before the end of the fourth year of study, the student must give a departmental seminar on their research.

7. The student must complete his or her degree before the end of the seventh year of study.

Enrollment in courses outside of the physics department which are not explicitly included in an academic plan approved by the DGS and the student's research advisor, are inconsistent with satisfactory progress toward a degree and will therefore jeopardize a student's standing.

***Sanctions*:** Students failing to maintain satisfactory progress may be placed on probation, or declared not in good standing and expelled from the Ph.D. program. Probation is not required before a loss of good standing. This decision is made by the Graduate School of Arts and Sciences in consultation with the DGS and the Graduate Program Committee.

A student on probation is given a fixed amount of time to rectify the problems noted. If the student fails to do so, he or she is no longer in good standing and may be expelled from the program. The details of an individual case of probation will be explained in a letter to the student from the Graduate School of Arts and Sciences.

***Teaching Duties*:** In addition to the above, students receiving support as a TA or grader must perform their duties with appropriate diligence. Students failing to perform satisfactorily may be deemed ineligible for future departmental support, at the discretion of the Financial Aid Committee.

***Academic Misconduct*:** The department does not tolerate any form of academic or scientific misconduct. In addition to referring violations to the Honor Committee, the Graduate Program Committee reserves the right revoke a student's eligibility for financial support in cases of misconduct.

Master's Degrees: Students pursuing a Master's degree must pass all coursework required for the degree. M.S. students must also be affiliated with a research advisor after the first year of study. Students failing to meet these requirements may be subject to sanctions as described above.

V. Policies and Benefits

Code of Conduct: All members of our department community have the right to conduct their academic, scientific and professional work free from discrimination, harassment, and retaliation. Each member of the Department of Physics community is responsible for maintaining a work environment where everyone feels respected and included. To this end, each student should be familiar with the Physics Department Code of Conduct as well as related GSAS and University policies.

***Course work outside of the department*:** All courses taken outside of the Physics Department must be included in a comprehensive academic plan. This plan must be approved by the DGS and the student's research advisor. It is the student's responsibility to secure this approval. Coursework taken outside of an approved academic plan is inconsistent with progress toward a degree. For this reason, students taking courses outside the department without an approved plan risk academic probation or a loss of good standing.

***Leave of Absence*:** Students may request a leave of absence from the program for any reason. An official leave of absence must be approved by the Dean of the Graduate School of Arts and Sciences, and will be noted on the student's transcript. Taking a leave of absence will have no impact on a student's standing, unless the leave extends for more than two calendar years. After longer absences, the student must apply for readmission to the program.

***Health Insurance*:** All registered students are required to carry an approved health insurance policy. Basic health insurance is provided at no charge to students receiving financial support, but students are required to apply for this coverage each year. Application information is provided at the beginning of the fall semester. Optional dental coverage is also available, which is paid by the student.

***Property Liability*:** The department cannot assume liability for personal belongings that are stolen, damaged, or destroyed in department facilities. Students are encouraged to obtain renter's or homeowner's insurance to protect their private property.

***Student Services*:** Students receiving financial support are eligible for student services provided by the University. Services include gym access, intramural sports, attendance at athletic events, and access to the student health center. Further information can be found on the University web site. These services are available during the summer with optional fees borne by the student. The summer research assistantship wage has been set above the academic year wage to provide funding for those optional fees.

***International Students*:** The University's International Studies Office (ISO) provides support for issues specific to international students, including visa applications and tax advice. However, international students are individually responsible for knowing and following all relevant regulations. One notable requirement is that international students traveling to do research at an off-campus location must inform the ISO before leaving campus. It is important that ISO know the whereabouts of every international student.

International students should also be aware that going back home at any time during the academic year make give rise to unexpected visa problems. Students should make sure to return on time when traveling during the academic year or summer so they do not miss classes or TA training and assignments. The department cannot be responsible for any visa problems that may arise upon re-entering the country as it is out of the department's control. If the student travels during a break but cannot return by the start of the semester, the department may not be able to financially support them until the following semester after their return to the department. **It is not recommended to seek a visa renewal during the winter break, as time may run short between the fall and spring semesters.**

***Harassment and Discrimination*:** The Physics Department fully adheres to University policies in that it does not tolerate any form of harassment or discrimination. Students are encouraged to bring any incident or situation that makes them feel uncomfortable to the attention of the DGS. Alternatively, the Graduate Program Committee, the Grievance Committee, and the Department Chair provide other resources within the department, while the Dean of Students and the Ombudsman can provide assistance at the University level.

***Grievances*:** The department's Grievance Committee is available to consider grievances from students that are not resolved through direct discussion with an individual faculty member. A student should feel free to bring any unsatisfactory issue to the attention of the committee. The Ombudsman provides a similar service at the University level.

VI. Safety

To ensure safe practices in department laboratories, students should be aware of the following guidelines:

***Emergencies*:** For general emergency response, contact the campus police by dialing **911** from any phone. For facility emergencies such as water leaks or electrical faults, contact Facilities Management at extension 4-1777.

***Lab Safety*:** When a student begins work in a teaching or research laboratory, he or she must become familiar with the safety regulations for that laboratory. The student's research advisor, the lab course instructor, or the department's Director of Laboratories should be consulted regarding lab-specific regulations. Students are encouraged to frankly discuss any concerns about laboratory safety with their research advisor, the DGS, a member of the Graduate Program Committee, or a member of the Committee on Infrastructure and Safety.

***Eye Safety*:** Safety glasses or goggles should always be worn when working where the eyes are potentially exposed to chemicals or flying debris. In laser laboratories, safety goggles must meet the precise attenuation and spectral specifications appropriate to the particular type of laser used in the laboratory.

***Hair Safety*:** Long hair should always be tied back or covered when working with moving machinery.

***Student Shop*:** The department has a machine shop available for students to use for research-related projects. Before using the student shop, a student must be certified as being able to use the equipment safely. Normally, certification is obtained by taking a short course. The department's professional machine shop staff manages the student shop and the certification course. The cost of the course is typically covered by the student's advisor.

VII. Department Organization

***Communication*:** The department endeavors to keep students informed of upcoming events, deadlines, and opportunities. Communication is through both e-mail and student mailboxes located in the hallway between the main building and the its additions, near room 107. It is a student's responsibility to check their e-mail daily and mailbox regularly. Students working off-campus should inform the office staff so that important information can be forwarded appropriately.

***Seminars and Colloquia*:** A weekly schedule of seminars and colloquia is listed on the department web site, distributed via e-mail, and posted several places in the department facilities. Note that any student may attend any seminar. Students, like faculty, are expected to attend the weekly department colloquium on Friday afternoons. First and second year students are required to attend the colloquia.

***Services*:** The department provides several services important to graduate education and research, including computer support, administrative support, management of teaching laboratories, professional machine and electronics shops, and a department stockroom. More information about these services can be obtained from the department web site.

***People*:** Contact information for all physics faculty, staff, and students can be found on the department web site. Some positions and committees of particular interest to graduate students are listed below. The department web site has a complete list of departmental committees as well as a current listing of position holders.

Department Chair: Overall executive responsibility for the department.

Director of Graduate Studies (DGS): Oversees the graduate program. Main contact for student advising on academic or other student issues.

Graduate Program Assistant: Administrative assistant for the graduate program. Main contact for administrative issues.

Teaching Assistants and Graders Chair: Organizes teaching and grading assignments. Main contact for TA questions.

Director of Laboratories: Oversees department infrastructure and technical personnel. Main contact for building and facilities questions.

Chair of Committee on Infrastructure and Safety: Coordinates safety initiatives and reports for laboratories in the department.

Ph.D. Qualifying Examination Chair: Organizes and schedules the qualifying exam.

Chair of the Summer Session: Manages summer session courses and teaching assistants.

Graduate Program Committee: Sets policy for the graduate program.

Financial Aid Committee: Awards TA assignments and departmental fellowships; selects nominees for extra-departmental fellowships.

Grievance Committee: Assists with student concerns that could not be resolved through direct discussion with a faculty member.

VIII. University Resources

The general University of Virginia website is http://www.virginia.edu. It provides information on upcoming events, links to all University organizations, and directory information for students, faculty, and staff. The following sites provide information or services that graduate students may find particularly useful:

Academic Calendar: Academic holidays and deadlines.

Website: http://www.virginia.edu/registrar/calendar.html

Campus Police: Security and emergency response. For emergency service, dial 911 from any phone.
Website: http://www.virginia.edu/uvapolice

Career Services: Help with finding a job after graduation.
Website: http://www.career.virginia.edu

Center for American English Language and Culture: English language classes for international students.
Website: https://caelc.virginia.edu/

Center for Teaching Excellence: Services and resource materials designed to enhance teaching abilities.
Website: http://cte.virginia.edu/
Collab: Collaboration support and course websites.
Website: https://collab.itc.virginia.edu/portal

Counseling and Psychological Services: Counseling and psychiatric services including crisis management.
Website: https://www.studenthealth.virginia.edu/caps

Dean of Students: Advising and support on issues of student life.
Website: http://www.virginia.edu/deanofstudents

Environmental Health and Safety: Enforces safety regulations and handles materials disposal.
Website: http://ehs.virginia.edu/ehs

External funding and assistantship restrictions: policies for external funding and additional employment.
GSAS Financial Assistance policy
Website: http://records.ureg.virginia.edu/content.php?catoid=53&navoid=4166#Financ_Assist
University policy on Graduate Assistantship restrictions
Website: https://uvapolicy.virginia.edu/policy/PROV-001#Appointment_Restrictions

Facilities Management: Maintenance and repair work for building facilities. (See also the Director of Laboratories.)
Website: http://www.fm.virginia.edu

Graduate Record 2021-2022: GSAS academic rules, program and course listings.
Website: http://records.ureg.virginia.edu/content.php?catoid=53&navoid=4238

Graduate School of Arts and Sciences: GSAS policies, information, and contacts.
Website: http://graduate.as.virginia.edu/

Graduate Student Council: Graduate student self-governing body.
Website: http://gradcouncil.com/

Human Resources Workday Portal: Time Entry, Payslip Information, Banking information, Tax Forms
Website: https://hr.virginia.edu/workday-central

Information Technology and Communication (ITC): University-level computer support and licensed software.
Website: http://itc.virginia.edu

International Studies Office: Support and services for international students.
Website: http://iso.virginia.edu/

Learning Needs and Evaluation Center: Diagnosis and services for students with learning disabilities.

https://www.studenthealth.virginia.edu/student-disability-access-center/having-academic-difficulties

Ombuds: Advocacy and advice regarding conflict resolution and issues of fairness.
Website: https://eocr.virginia.edu/ombuds/

PhDPlus: a university-wide initiative to prepare doctoral students for long-term career success
Website: https://phdplus.virginia.edu

Student Health: Clinical services and specialist referral.
Website: http://www.virginia.edu/studenthealth

Student Information System: Course registration and academic records.
Website: https://in.virginia.edu/sis

Student Legal Services: Low-cost, confidential legal assistance.
Website: https://sls.virginia.edu/

Summer Session: Information regarding summer TA positions.
Website: http://www.virginia.edu/summer

The Graduate Guide: Excellent resource for local information and services
Website: http://gradstudies.virginia.edu/gradguide

University of Virginia Library: Library services.
Website: http://www.library.virginia.edu/