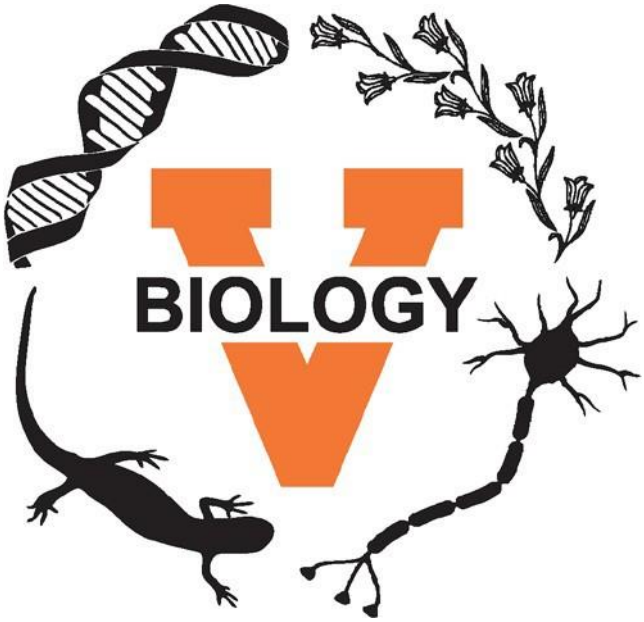
UNIVERSITY

OF

VIRGINIA

DEPARTMENT OF BIOLOGY



GRADUATE STUDENT HANDBOOK

Revised August 2025

TABLE OF CONTENTS

PhD PROGRAM IN BIOLOGY

KEY DATES [Goto TOC]

Before Year 1:
- Late May: University of Virginia English Language Proficiency Exam (UVELPE; as required)
- Mid July: Complete preliminary academic survey
- Early August: Submit rotation preferences
- Mid August: Initial advisory meeting via Zoom
- Late August: Complete safety training certification

Year 1:
- Late August: Program orientation
- Mid October: Second rotation selection
- Late November: Third rotation selection (if applicable)
- Mid December: First semester review meeting with Graduate Committee
- Late April: Thesis laboratory selection

Year 2:
- Late October: Committee formation
- Late November-early December: Schedule qualifying examination for spring
- Feb-April: Qualifying exam

Year 3-5:
- Fall semester: Annual committee meeting, starting in students' 3rd year
- Spring semester: Follow-up committee meeting as needed

Graduation semester
- Thesis to first reader six weeks prior to private defense
- Thesis to committee two weeks prior to private defense
- Private defense prior to public defense

PROGRAM MISSION AND OBJECTIVES [Goto TOC]

I. Program Overview

The Biology PhD program at the University of Virginia develops independent investigators through structured technical training, hypothesis-driven research, and evidence-based teaching preparation. Our curriculum leverages the department's broad expertise—from molecular mechanisms to ecosystem dynamics—to train scholars in experimental design, quantitative analysis, and research dissemination. Through intensive laboratory rotations, advanced coursework, and mentored teaching experiences, students master both the scientific method and pedagogical approaches. Graduates emerge equipped to design innovative research programs, secure independent funding, publish impactful findings, and educate future generations of scientists.

II. Core Competencies and Learning Outcomes

Our program develops technical expertise and professional capabilities through systematic training in experimental methodologies, quantitative analysis, and scientific communication. Students engage in rigorous laboratory rotations where they master advanced instrumentation, statistical approaches, and experimental design principles. This technical foundation supports the development of independent research programs investigating fundamental biological questions.

Beyond methodological training, students cultivate essential skills in research program development and scientific leadership. Through structured mentoring relationships and collaborative projects, they learn to direct complex investigations, manage research resources, and foster productive laboratory environments. This comprehensive training enables graduates to secure competitive funding, establish independent research programs, and advance

biological knowledge through high-impact publications.

The program emphasizes evidence-based teaching preparation through carefully designed pedagogical training. Students develop and implement effective instructional strategies while learning to communicate complex scientific concepts to diverse audiences. This integration of research excellence and educational expertise prepares graduates for impactful careers advancing both scientific discovery and future scientist training.

Through this multifaceted approach, our program produces scholars who demonstrate mastery of experimental design, quantitative analysis, research dissemination, and scientific leadership—core competencies essential for success in modern biological research. Our graduates emerge prepared to make significant contributions to biological knowledge while training future generations of scientists.

STUDENT ADVISING AND SUPERVISION [Goto TOC]

I. Entering Students

Incoming first-year students will meet individually with an interim advisory committee during the summer before the start of the PhD program. This committee, composed of Graduate Studies Committee faculty and faculty whose research aligns with the student's interests, will help incoming students plan for their first year. Discussions will cover the student's previous academic background, research experience, specific research interests, and career goals. The committee will also address any logistical constraints or areas where the student may need additional support. These tailored conversations are designed to help first-year students make informed decisions about their course options and rotation schedules. These meetings will take place via Zoom and will be scheduled by the Graduate Studies Coordinator.

Throughout the first year, the interim advisory committee and the DGS will serve as the primary advisors for students until they join their thesis lab typically in the Spring of the first year. Students are encouraged to reach out to their interim advisory committee or the DGS at any time with questions or concerns about the program or their experience as a graduate student. In early fall, students will meet once again with their interim advisory committee to plan courses and rotations for the following semester and to address any questions or issues that may have arisen. Toward the end of the fall semester, all first-year students will meet with the DGS and the Graduate Studies Committee to review their first semester progress, discuss any concerns, and receive recommendations for the next semester. Please note that rotation schedules and course plans must be approved by the DGS in consultation with the Graduate Studies Committee.

II. Ph.D. Advisor

Each student will eventually choose one professor in the Biology Department to serve as their principal mentor and advisor for the duration of their graduate studies. The choice of this Advisor is by mutual agreement between the student and professor and is usually made at the end of the spring semester of the first year (typically by May 1), after the student's final laboratory rotation. Students who enter the program with a Master's degree are only formally required to complete one rotation and may select a Advisor at the end of their first semester. Students inform the DGS of their choice of an Advisor, who then solicits confirmation from the selected Advisor. Either party can terminate this agreement. In such a case, both student and professor shall provide written notice to the DGS. With the guidance of the Advisor, the student develops a research program appropriate for a doctoral dissertation. The student completes this research program with direction from the Advisor and the Dissertation Committee, who together guide the student's research, evaluate progress toward completion of the dissertation, and assesses the suitability of the body of work for a Ph.D. degree.

If the Advisor holds a courtesy appointment in the Biology department, and a primary faculty appointment in another department, then the Chair of the Department of Biology must approve the student's choice of a Advisor. In these cases, the Director of Graduate Studies will prepare a letter of agreement defining the financial arrangements for the student. This letter must be signed by the student's Advisor, by the Chairs of both the Advisor's Department and the Department of Biology, and by the Director of Graduate Studies in Biology. This agreement will become part of the student's departmental file and stipulates that all future student expenses (including stipend/wages, tuition, and health insurance) are the responsibility of the Advisor or, should funds be unavailable, of the Major Professor's department. Students who select a Advisor holding a primary appointment in a department other than Biology are still eligible for support as Graduate Teaching Assistants in Biology if positions are available but are not eligible for GSAS Fellowships provided through Biology beyond their first year.

III. The Dissertation Committee

By the end of October of the second academic year, the student and their Major Professor choose four additional Graduate Faculty at the University, in disciplines relevant to the area of dissertation research, to serve together with the Major Professor as the Dissertation Committee. At least three of the five faculty members on the Dissertation Committee, including the Major Professor, must carry primary or joint appointments in the Department of Biology. One member of the Dissertation Committee must be a Graduate School of Arts & Sciences or BIMS-affiliated faculty member appointed in a department other than the Department of Biology (this committee member is also known as the GSAS representative). Faculty members who have a joint appointment in Biology and in another department are not eligible to serve as the GSAS representative. Faculty who have courtesy appointments in the Biology Department are eligible to serve as the GSAS representative. One member of the Dissertation Committee who is appointed in the Department of Biology, other than the Major Professor, will be designated as the First Reader. In consultation with the Graduate Committee, the DGS approves the composition of each Dissertation Committee at the time the Dissertation Committee is assembled and when changes in the composition of the Dissertation Committee are requested. Students must notify the DGS and graduate program coordinator of their committee members by the end of October of their second year, but are encouraged to do so earlier.

The First Reader serves as the chairperson of the Dissertation Committee and chairs the Qualifying Examination, required annual progress meetings, and the Dissertation Defense. After each of these meetings, the First Reader will submit to the Director of Graduate Studies a summary of the meeting/exam/defense highlighting the student's progress and the Committee's recommendations and expectations. Standard forms for summarizing the Qualifying Exam and annual progress meeting are available on the Biology website. The First Reader also selects a Second Reader from the Dissertation Committee to help review the Dissertation Proposal prior to its distribution to the entire Dissertation Committee in advance of the Qualifying Examination.

The Dissertation Committee serves as the Examination Committee for the qualifying examination and dissertation defense. It also serves as an advisory body to the student during the tenure of her/his graduate studies; students are required to meet annually, or more frequently as needed, with their Dissertation Committee. It is the student's responsibility to schedule these meetings to ensure that they remain in good standing in the graduate program. Students should schedule these meetings several months in advance to ensure availability of their committees.

ACADEMIC REQUIREMENTS for the PH.D. DEGREE [Goto TOC]

I. Formal Course Work

The Graduate School of Arts and Sciences (GSAS) requires the completion of no less than 72 hours of graduate credit for the PhD degree. Of the 72 credit hours, a student must take a selection of topical credit hours including a series of first-year graded courses (BIOL 8240, BIOL 8250, GSCI 8000), laboratory rotations (BIOL 9910 and BIOL 9920), a second-year writing course (BIOL 8260), one colloquium or journal club course, and 18 credits of graded elective lecture and/or laboratory courses. The 18 credits of graded elective lecture/lab courses must be at the graduate level (5000-level courses or above).

The remaining required credit hours may be filled with non-topical research credits (BIOL 9998 & 9999). Enrollment in BIOL 9995, Topical Research in Biology, is limited to a maximum of 6 credit hours. Transfer credit for up to 6 hours of relevant graduate-level course work taken after completion of the undergraduate degree at this or other institutions may be granted upon successful petition to the DGS and the Graduate Committee and can be used to satisfy up to six of the 18 required graded lecture/lab elective credits. Regardless of the area of research interest and specialization, each graduate student is urged to seek a broad background in the biological sciences by selecting a diversity of courses.

The Department expects that the required topical credit hours will be completed by the end of the student's 4th semester (i.e., Spring of the 2nd year). Students must register for no less than 12 credit hours per semester to be considered a full-time student, and 6 credits during the summer unless they are being paid by a fellowship. Requests to enroll in more than 15 credit hours must be approved by the Assistant Dean of the Graduate School of Arts and Sciences. Students must submit this request by filling out the standard course action form and the DGS must also secure approval from the Assistant Dean via email. Prior to completing coursework, students may enroll in up to 12 credit hours of Non-Topical Research, Doctoral Prep (BIOL 9998). After formal coursework is completed and the qualifying exam is passed, students usually register for 12 credit hours of Non-Topical Research, Doctoral (BIOL

9999).

Almost all graduate-level topical courses are offered on a graded basis. The following set of grade symbols is used by the Graduate School of Arts and Sciences: A+ (4.0), A (4.0), A- (3.7); B+ (3.3), B (3.0), B- (2.7), C (0.0). According to Graduate School regulations, a grade of B- is the lowest satisfactory grade for graduate credit. Furthermore, students must maintain a grade point average of at least 3.0 each academic year in order to be considered by the Graduate School of Arts and Sciences as making satisfactory progress toward a degree. Although a grade of B- is adequate for general academic credit, it is considered a marginal grade for pre-doctoral students in the Department of Biology. Thus, a grade of B- or lower in one or more courses, especially in the first year, will be viewed as an indicator of unsatisfactory progress in the doctoral program.

The Biology Graduate Committee reviews student grades at the end of each semester. Any student receiving a grade of B- or lower in any graduate course will be placed on academic probation and provided recommendations for improvement. If academic progress does not improve within the next semester, the Graduate Committee may recommend expulsion from the program to the Dean of the Graduate School of Arts and Sciences.

II. First & Second Year Required Courses

Each first-year student is required to register for BIOL 8240 (Professional Skills for the Life Sciences I), BIOL 8250 (Professional Skills for the Life Sciences II), GSCI 8000 (Research Ethics). Students are also required to register for BIOL 8260 (Writing in Science: creating grant and research proposals) in the fall of their second year. The purpose of these courses is to provide new students with experience in scientific communication, introduce skills for success in graduate school, learn how to write effective grant and research proposals, clarify the tenets of responsible conduct and reporting of research, and introduce new students to research in the department.

III. First Year Laboratory Rotations

Laboratory rotations serve as a foundational component of the Biology PhD program, providing first-year students with comprehensive research exposure across diverse scientific environments. During each rotation, students engage directly with ongoing research projects, acquire advanced methodological expertise, and develop critical experimental design capabilities. This immersive experience facilitates both technical skill development and integration into the departmental research community.

Rotations allow you to assess whether a lab's research focus aligns with your interests and career goals while also helping you build relationships within the Biology community. You'll gain insight into the lab's culture, the mentorship style of the principal investigator (PI), and the dynamics among lab members—crucial factors in making an informed decision about where to conduct your thesis research. Recognizing the diversity of research interests, experience levels, and career aspirations among new graduate students, our program offers flexibility in how you fulfill your rotation requirements. Typically, you will complete two or three rotations during your first year, choosing from one of the models described below.

Two-Rotation Model: This model is suitable for students who already have a strong sense of which lab(s) they may want to join and so are comfortable focusing more intensely on a specific research area. One rotation occurs in the fall semester and one in the spring semester. Over winter break, students doing two rotations are expected to engage in research with either of their two rotation mentors.

Three-Rotation Model: This is ideal for students who are exploring different options for research homes and want a broad exposure to diverse science. Under this model there are three 10-week rotations spread across the academic year, giving students diverse experiences across multiple labs. In general, students who are conducting three rotations will conduct their first rotation from the start of fall semester to the last week of Oct; their second rotation from the first week of Nov into January; and their third rotation from late Jan until the first week of April. The specific dates for transitioning between rotations change from year to year and students are expected to work with their rotation supervisors to dates specific. Following the 3rd rotation, students are expected to join their dissertation lab.

Flexible Rotation Model: This is designed for students with specific research needs or interdisciplinary projects that require flexibility beyond the standard two or three-rotation models. For example, you may want to split your time between two labs or have an extended stay in one lab with a shorter rotation in another, allowing for a tailored experience that aligns with your academic and professional goals. This might be the case if you have a strong sense of which lab you would like to join but an additional brief rotation would be useful for establishing a collaboration or co-mentorship, or for learning a particular technique. Students choosing the flexible rotation model must have their

plan approved by the Director of Graduate Studies.

Rotation lab eligibility. As a Biology PhD student, you are expected to complete your laboratory rotations within the Department of Biology, rotating with faculty who hold a primary appointment in the department.

In some circumstances — such as if you are unable to find a suitable lab with primary appointment in the Department of Biology or if you wish to obtain a specific skill — you may rotate with faculty who have courtesy appointments in the Biology Department. However, this is only possible if the external faculty member holds a courtesy appointment in the Department of Biology at the start of the year in which you entered the PhD program. Affiliated faculty are listed on the Biology Department webpage.

It's important to understand that choosing to conduct your dissertation research with faculty who hold only a courtesy appointment in the Department of Biology will place you outside the immediate Biology department environment and community. This choice comes with specific requirements and restrictions regarding your financial support. While collaboration with faculty from other departments is highly encouraged during your research, those who do not have a primary or courtesy appointment in the Department of Biology are not eligible to host rotation students or serve as your Ph.D. supervisor.

Special Considerations: If you are taking the BIMS core course (BIMS 6000), your rotation schedule will differ to accommodate that commitment. Your first rotation will begin in October after completing the first half of the core course and will last for six weeks. You will then return to complete the second half of BIMS 6000. Your second rotation will begin after winter break (start date Jan 6th for 2024-2025) and can last for either the entire Spring semester or for approximately 6-7 weeks (approximate end date Feb. 14 or 21) with time left for a third rotation (approximate start date Feb. 17 or 24 with end date April 4th). Following the 3rd rotation, students are expected to join their dissertation lab.

In extenuating circumstances, a rotation may be completed during the student's first summer semester, but approval from the Director of Graduate Studies (DGS) must be given by the first week of April.

Students who have completed an M.S. degree in Biology or a related field at UVA or another institution are required to complete one rotation during their first semester in the Department. An official transcript must be submitted to the Graduate Program Coordinator should the student want to waive the requirement for a second rotation.

Expectations and Outcomes: You are expected to be actively involved in the lab's research activities, whether at the bench, in the field, conducting computational work, or reading literature in your field and writing research proposals. Your goal is to contribute meaningfully to the lab's research while gaining skills and insights that will help shape your dissertation. You will give a public oral presentation on your rotation efforts in the fall, and a public poster presentation in the spring. At the end of each rotation, both you and your PI will provide feedback on the experience to one another and to the DGS. This might include discussions about what you learned, any challenges you faced, and your overall fit with the lab. This feedback is crucial in helping you decide your next steps. After completing your rotations, you will work with the DGS and your rotation advisors to decide on the best lab for your thesis research. This decision will be based on your interests, the skills you've developed, and the potential for a productive and fulfilling research experience in your chosen lab.

Tracking and Grading: To assure you are meeting your requirements, and that these are applied consistently and fairly across the program, your progress through the rotations will be tracked by the DGS and the Graduate Studies Committee. Accordingly, you and your rotation advisors will need to provide information about your rotation plans and outcomes, and this will be used by the DGS in assigning graded credit for your research activities across your first two semesters. Please respond expeditiously with information when prompted to do so by the Graduate Coordinator.

Flexibility and Assistance: If you encounter any issues during a rotation, such as a mismatch with your research interests or interpersonal challenges, you are encouraged to discuss these with the DGS. Adjustments to your rotation schedule can be made to ensure you get the most out of your first-year experience.

IV. Colloquia and Seminar courses

Students are required to take at least one graduate-level colloquium or journal club course during their first three semesters. Colloquia are courses in which students orally present and discuss recent research progress and journal clubs are courses in which students present and discuss research papers from the relevant biological literature.

V. Electives, Other Courses, or Training (including MLBS courses)

Besides the formal course work listed above, students are required to complete 18 credits of elective graded coursework. These electives must be at the 5000-level or above and relevant to a scientific background. Student are expected to complete these elective requirements by the end of their 2nd year.

Students typically choose to start with Integrative Biology 1 & 2 (BIOL 8011/80XX), the Advanced Ecology and Evolution series (BIOL 8081-4), the Foundations of Neuroscience (BIOL 7240), or the BIMs Core Course in Integrative Biosciences (BIMS 6000). Students will meet with a first year advising committee in the summer before they arrive to discuss these elective options. In addition to these core elective offerings, students may need to take additional graded elective courses to meet the 18-credit requirement. Students are encouraged to explore options in the Biology Department, as well as courses in other relevant departments and schools.

Additional courses or training may be recommended or required by the student's Major Professor or Dissertation Committee. Proficiency in computer science, in statistics, or in other specialized areas, may be set as additional requirements by the Dissertation Committee.

The Major Professor or Dissertation Committee may also recommend or require that a student participate in course work or independent study at a field station or at another institution. In special situations, for example, when a student holds a traineeship in an interdepartmental training program, the training grant may impose additional course requirements additional course requirements may be imposed as stipulated by the training grant.

Students may complete courses at the Mountain Lake Biological Station (MLBS) during the summer for credit with prior permission from the MLBS Director and the Director of Graduate Studies. To do so, students must register in the following Fall semester for BIOL 9995, Topical Research in Biology, for the number of credits equal to the credits of the MLBS course. For the course to be eligible for credit, the MLBS course instructor must send a written evaluation that includes a letter grade to the Director of Graduate Studies and to Graduate Program Coordinator after completion of the course.

Students may elect to take courses offered by other institutions if those courses are relevant to their course of study. The Department of Biology may provide supplemental funding toward the costs of such external courses; requests for Britt Biology Travel Awards are solicited three times/year by the Graduate Committee. Students must submit a formal application for supplemental funding as directed by the Britt Travel Award Announcement.

VI. Non-Topical Research

After completion of the graded topical credit hours required by GSAS and passing their qualifying exam, students register for 12 credits of Non-Topical Research BIOL 9999 (for Ph.D. students) or BIOL 8998 (for M.S. students) under their faculty advisor every semester until they graduate.

OTHER REQUIREMENTS [Goto TOC]

I. Teaching

Ph.D. students entering the program after 2023 must complete at least two full-time, semester-long graduate teaching assistantships (GTA). Students who started the PhD program prior to 2023 only need to complete one semester as a GTA. PhD students may be funded more than two semesters as a GTA. A student with an external award that precludes teaching at any time during their graduate education may petition the Graduate Committee for exemption from whole or part of this requirement. Specific GTA assignments will be determined prior to each semester by the Department of Biology's Director of Undergraduate Programs, in consultation with the Director of Graduate Studies and based in part on input from individual students about their areas of interest and expertise.

II. Teaching Assistantship Requirements and Evaluation

Because teaching represents an important component of the department's academic mission, students who accept GTAs also accept the responsibility of completing these assignments satisfactorily. Students who use English as a second language must satisfactorily complete the CAELC English language testing/training program to be eligible for a teaching assignment. All students must perform satisfactorily in their teaching assignment, as judged from course

evaluations or reports from supervisory faculty, to maintain their GTA and to be eligible for future GTAs and to remain in good standing in the Department. GTAs who are unable to perform their GTA duties due to extenuating circumstances must contact the instructor and the Director of Graduate studies with information about their circumstance.

III. Residency

Ph.D. students are strongly encouraged to plan on completing their dissertation in five years. After five years, funding is not guaranteed and must be arranged with the Director of Graduate Studies. To request an extension beyond seven years' time to complete the Ph.D. degree, a student must submit a "Request for Extension of Time to Complete Degree Form" to the Director of Graduate Studies for his/her signature before it can be submitted to the Graduate School of Arts and Sciences for final approval.

IV. Student Participation in Departmental Activities

Satisfactory progress to degree includes the expectation that all graduate students attend departmental seminars and student and faculty research talks. Graduate students are encouraged to become energetic members of the Department of Biology by participating regularly in its various academic and social activities. Graduate student participation in meetings of the Graduate Student and Postdoc Association (GSPA), annual recruitment activities during visits by prospective graduate students, and weekly lunches with visiting seminar speakers is strongly encouraged. At the discretion of the Chair of the Biology Department, graduate students may be invited to serve as members of departmental committees that broadly impact research and/or teaching in the department. For example, in addition to faculty members, the Graduate Committee has a student representative each year.

ASSESSMENT OF GRADUATE STUDENT PROGRESS [Goto TOC]

I. First Year Evaluation

The Graduate Committee evaluates the overall performance and progress of each new student after their first semester and year. The Committee considers (1) performance in formal course work and laboratory rotations; and (2) participation in seminars, teaching, and other general academic activities of the Department. A student whose overall performance has been judged satisfactory may proceed into the second year of study. A student whose performance has been judged unsatisfactory will be required to do one of the following: (1) successfully complete additional course work; (2) pursue a Master's degree instead of a Ph.D.; or (3) leave the Biology graduate program.

II. Second Year Qualifying Examination

During the spring semester of the second year of study, each student must successfully complete a qualifying examination administered by the student's Dissertation Committee.

The Qualifying Examination consists of two components: (1) a written document describing the student's proposed research and research plan; and (2) an oral defense of the proposal to the student's Dissertation Committee. The written document consists of a proposal that includes the specific aims of the student's proposed research, the scientific background and significance of the proposed study, a summary of preliminary results, a detailed description of the planned experiments including the rationale and expected outcomes, and a list of all references cited in the text. Students will develop initial drafts of proposals during the Fall of their second year, in conjunction with BIOL8260 or an equivalent writing course.

Because the primary purpose of the Qualifying Examination is to test the student's competence in their general area of study, a satisfactory performance requires that the student demonstrate a comprehensive and in-depth knowledge of the concepts and methodologies of the disciplines comprising their major area of research interest. The student will also be expected to demonstrate an authoritative and up-to-date grasp of the literature in their area of specialization and to be able to discuss in detail the experimental design, rationale, and methodology of in their proposed research.

Prior to submitting the Dissertation Proposal to the Dissertation Committee, the proposal must be approved by the First Reader of the Dissertation Committee. The First reader may solicit opinions by other members of the Dissertation Committee. The student will receive a written evaluation of their proposal from the First Reader, indicating the proposal's acceptability, detailing the overall strengths and weaknesses of the research plan, and

outlining any revisions that may be required for the final draft. The standard expectation is that the First reader has two weeks to review the proposal, and thus students should aim send the first reader a draft of their proposal 6 weeks prior to their planned defense.

A student whose Dissertation Proposal is deemed satisfactory after the preliminary review will distribute a copy of their proposal to each member of their Dissertation Committee and schedule an oral presentation and defense of the Dissertation Proposal with their Dissertation Committee. A minimum of two weeks must elapse between distribution of the proposal to the Committee and the exam. The Qualifying Examination should occur no later than the last day of classes in the spring semester.

A student whose written proposal is deemed unsatisfactory by the First Reader will be given an opportunity to address the deficiencies noted by the faculty reviewers and to submit an appropriately modified proposal. If the resubmitted proposal is accepted, the student will be allowed to proceed to the Qualifying Examination.

A student whose overall performance in the Qualifying Examination has been judged unsatisfactory will not be admitted directly to doctoral candidacy. At the discretion of the Dissertation Committee, such a student may be offered the option of reexamination within a specified period. If the student is not offered reexamination, or if the student's performance is judged unsatisfactory on reexamination, they will be directed either to pursue a program leading to the Master of Science degree or to leave the Department.

At the end of the Qualifying Examination, it is the responsibility of the First Reader to complete a “Ph.D. Examination Form”, which includes a written summary of the outcome of the Qualifying Examination that includes a summary of the consensus view of the committee and any recommendations of the Dissertation Committee for the student to the Graduate Program Coordinator.

III. Annual Progress Evaluation Beginning in the Third Year

So that the Dissertation Committee remains abreast of the student's progress, the student is required to meet with the Committee at least once every 12 months. The first regular committee meeting is expected to occur in the Fall term of the student’s third year. This meeting is necessary to remain in good standing in the Ph.D. program. After the meeting, the First Reader submits a brief report describing the Committee's appraisal of the student's progress, as well as any recommendations, directions or additional requirements set for the student by the Committee, to the Graduate Program Coordinator. Dissertation committees may request an additional meeting in the Spring semester if the Fall semester meeting is deemed unsatisfactory.

THE DISSERTATION AND ITS DEFENSE [Goto TOC]

Each student is required to complete a piece of original and significant research for their doctoral degree. Upon completion of the dissertation research, the candidate presents the written dissertation, in a form approved by the Major Professor and First Reader of the Dissertation Committee, to the Dissertation Committee for its approval.

An acceptable form for the dissertation would be an introductory review of the literature, followed by one or more papers in publishable form, followed by a general discussion. A PhD student is required to have at least one first-author, or co-first author, peer-reviewed research article published, in-press, or accepted for publication by the time of the private defense. PhD students who began in the program prior to Fall 2025 are exempt from this requirement. PhD student who began the program after Fall 2025 can petition the Graduate Committee for an exemption.

The dissertation, in a form acceptable for submission to the First Reader, will be submitted to each faculty member of the Dissertation Committee at least two weeks prior to the defense of the dissertation. The First Reader chairs the dissertation defense, and the GSAS representative (i.e. a faculty member from another department) must be present. Up to one member of the Dissertation Committee may participate in the defense via video conferencing. After successful defense of the dissertation, the student should ensure that the electronic GSAS Final Exam Docusign Form is signed by the dissertation committee, the DGS, and the Department Chair. Upon acceptance of a final version of the dissertation (i.e. the version that will normally be presented to the Graduate School of Arts and Sciences) by the Dissertation Committee, a public defense of the dissertation will be scheduled.

The public defense will take the form of a formal departmental seminar. Following the successful completion of the public defense, the dissertation is formally accepted. If substantive questions about the dissertation are raised during the public defense, then the Dissertation Committee will meet in private to discuss any changes to the dissertation required to complete the defense successfully. This permits the candidate to complete the final formal procedures for bestowal of the degree by the Graduate School. Note that all components of the dissertation, including private and public defense and submission of the finished thesis, must be completed by the appropriate GSAS deadline for that semester. Check with the graduate coordinator

FINANCIAL SUPPORT [Goto TOC]

Financial support, in the form of fellowships, traineeships, Research Assistantships (GRA) and Teaching Assistantships (GTA), is available to Ph.D. students as detailed below. If satisfactory progress is made, a Ph.D. candidate is assured support for five years by any combination of these support mechanisms. If there are significant mitigating circumstances, a student may apply for a longer period of support. Recommendations in such cases will be made by the Director of Graduate Studies, subject to approval by the Department Chair.

To qualify for continued financial support, students must maintain a cumulative grade point average (GPA) of 3.0 and must be in good standing in the Biology Graduate Program. In addition, eligibility for continued support through GTAs requires satisfactory performance by the student in her/his teaching assignments.

1. All students admitted into the Ph.D. program are assured financial support for five years of study, contingent on satisfactory progress in the program. Such support includes living support (in the form of teaching or research assistantship wages or fellowship stipends), plus full payment of tuition and academic fees and a single person health insurance premium

2. During the first year of study, Ph.D. students are typically supported with 1 semester of fellowship funding from the Graduate School of Arts and Sciences, plus 1 semester of funding from a Graduate Teaching Assistantship (GTA). Students enrolled in the BIMS 6000 core are typically supported by fellowship in the first semester and teach in their second semester, whereas students not enrolled in this course typically teach in their first semester and receive a fellowship in their second semester.

3. Beginning in the summer of the first academic year, students are generally supported as Graduate Research Assistants (GRA) with funds derived from the research grants of their Major Professors. Such support includes payment of the stipend and of "research" tuition and fees. Alternatively, students may be supported by an external traineeship or fellowship award.

4. Second-year Ph.D. students are typically supported by a Graduate Teaching Assistantship (GTA) during both semesters of the academic year, unless alternate support in the form of an external fellowship, traineeship, or Graduate Research Assistantship is available.

5. Support for students in the sixth year and beyond is dependent on the availability of fellowship funds, Teaching Assistantships, or research funds from the Major Professor.

6. All students are strongly encouraged to apply for extramural awards (e.g., NSF Pre-Doctoral Fellowships) to support their studies. In addition to the career-building prestige they confer, these external awards often provide a level of stipend support greater than that offered by a Teaching or Research Assistantship. Students are encouraged to discuss the preparation of these award applications with the Director of Graduate Studies and their Major Professor well in advance of the application deadlines.

MASTER DEGREE PROGRAMS IN BIOLOGY (M.S. and M.A.)

M.S. and M.A. Programs [Goto TOC]

I. Student Advising

The Master's degree candidate is expected to choose a Major Professor (i.e., thesis advisor) prior to admission

to the M.A. or M.S. program. The Major Professor aids the student in selecting courses and in making other academic decisions and directs the student in their thesis research. The student may change her/his Major Professor at any time. In such a case, both student and professor shall provide written notice to the Director of Graduate Studies.

A student entering the department as a declared M.S. or M.A. degree candidate meets with the Director of Graduate Studies and the designated Major Professor immediately prior to the beginning of the semester of admittance to plan a program of study. Requests for academic credit for graduate-level courses taken as part of graduate training at another institution should be made to the DGS at this time. Requests for transfer credit are subject to approval by the Graduate School of Arts and Sciences.

II. Academic Requirements

A Master's degree candidate must successfully complete no fewer than 30 credit hours at the graduate level (5000-level or above). A minimum of 24 credit hours of graded graduate-level course work is required. Included in the 24 credit hours is enrollment in four graded lecture/laboratory courses, one colloquium or journal club course and required first year courses: BIOL 8240 (Professional Skills for the Life Sciences I), BIOL 8250 (Professional Skills for the Life Sciences II), BIMS 7100 (Research Ethics). Note that enrollment in BIOL 8995 is limited to a maximum of 6 credit hours. The purpose of the first-year courses is to provide new students with experience in scientific communication, introduce survival skills for success in graduate school, learn the tenets of responsible conduct and reporting of research, and introduce students to the general research areas and faculty in Biology.

Satisfactory progress in graduate-level course work is governed by the policies of the Graduate School and the Department of Biology as described above for Ph.D. students.

III. Residency Requirements

Master's students should aim for completion of their thesis within two and a half years. All work for the Master's degree must be completed within five years from the time of admission. Residency requirements are set by the Graduate School of Arts and Sciences and can be found in the Graduate Record.

IV. Student Participation in Departmental Activities

Satisfactory progress to degree includes the expectation that all graduate students attend departmental seminars and student and faculty research talks. Graduate students are encouraged to become energetic members of the Department of Biology by participating regularly in its various academic and social activities. Graduate student participation in meetings of the Graduate Student and Postdoc Association (GSPA), annual recruitment activities during visits by prospective graduate students, and weekly lunches with visiting seminar speakers is strongly encouraged. At the discretion of the Chairperson of the Biology Department, graduate students may be invited to serve as members of departmental committees that broadly impact research and/or teaching throughout the department.

V. Master's Thesis Committee

M.S. Program Thesis Committee

An M.S. student's Thesis Committee is chaired by the Major Professor and consists of two other faculty of the Graduate School of Arts & Sciences (GSAS) who are appointed in the Department of Biology. In consultation with the Graduate Committee, the Director of Graduate Studies approves the composition of each Thesis Committee at the time it is assembled (by the end of January in the first year of study), and when changes in the composition of the Thesis Committee are requested. With the approval of the Director of Graduate Studies, faculty of other departments in the GSAS may serve on the Thesis Committee.

So that the Thesis Committee remains abreast of a student's progress, a student must meet at least once every 12 months with their Thesis Committee, with the first meeting held no later than the end of the first academic year. This meeting is necessary to remain in good standing in the program. Subsequent to each meeting of the Thesis Committee, the Major Professor prepares a brief written report that describes the committee's appraisal of the student's progress as well as any directions or additional requirements set by the student's Thesis Committee. A copy of this report is to be submitted by the Major Professor to the Graduate Program Coordinator

for inclusion in the student's departmental record.

M.A. Program Thesis Committee

An M.A. student's Thesis Committee is chaired by the DGS and Major Professor. Like the M.S., a student should meet with its Thesis Committee at least once every 12 months. This meeting is necessary to remain in good standing in the program. Subsequent to each meeting of the Thesis Committee, the Major Professor prepares a brief written report that describes the committee's appraisal of the student's progress as well as any directions or additional requirements set by the student's Thesis Committee. A copy of this report is to be submitted by the Major Professor to the Graduate Program Coordinator for inclusion in the student's departmental record.

VI. The Master's Thesis and Its Defense

Students should begin to formulate a thesis project in consultation with their advisor during the first semester of their program. M.S. students are expected to embark on a laboratory-based thesis, while M.A. students are expected to complete a library-based thesis. The library thesis entails an extensive literature search of a specific topic from which unifying concepts and themes are drawn for discussion and criticism. The laboratory thesis entails the completion of an original research project carried out under the supervision of the Major Professor.

Upon completion of the library or laboratory research, the student prepares a written thesis. This thesis must be prepared in the format specified by the Graduate School of Arts and Sciences in the pamphlet entitled "Physical Standards for Preparation of Dissertations and Theses."

The thesis must be reviewed and approved by the student's Thesis Committee. If the Thesis Committee is satisfied with the thesis and does not require additional research or extensive rewriting, an oral defense of the thesis is scheduled. During the thesis defense, the student is examined on their knowledge of general biology and of their area of research specialty. For a student who is unable to demonstrate proficiency in this examination, reexamination may be required by the Thesis Committee.

Upon successful completion of the thesis defense, the student should ensure that the "Final Examination Form" is completed and signed by all members of the Thesis Committee; this form should be given to the Graduate Program Coordinator for signature by the Department Chair or Director of Graduate Studies.

VII. Financial Support

Students in the Master's degree program are not guaranteed financial support upon acceptance into the program.

MASTER OF ARTS WITH SPECIALIZATION IN CONSERVATION BIOLOGY [Goto TOC]

This program is designed for completion within a single year, providing University of Virginia undergraduates the opportunity for a five-year program of study. Successful completion of this program results in the awarding of two degrees

Students are expected to follow the procedures for the Master's Degree Programs in Biology except as noted below.

Students should select a graduate thesis advisor (Major Professor) prior to application to the program and develop plans for an independent project in conjunction with their intended thesis advisor prior to completion of their undergraduate degree. The independent project may be on any topic related to Conservation Biology agreed

upon and supervised by the student's graduate thesis advisor. Independent projects may include research or projects structured around an internship with an institution doing work related to conservation. Most projects will be carried out during the summer between the fourth and fifth year and finished during the fifth year. Each student will select a Thesis Committee before the end of their first graduate semester.

The academic requirements for the M.A. with Specialization in Conservation Biology are 18 graduate credit hours of graded coursework, in addition to 12 graduate credit hours of independent research on an approved topic. The core course requirements include one course in Ecology, one course in Evolution, and a third class that may be in either subject. In addition, a graduate level methods course and seminar are required. The student's program

advisors will evaluate the appropriateness of specific courses to each required area. Additional courses required of all M.A. students must also be taken.

In addition, to the standard MA thesis requirements, students are expected to give a public presentation of their thesis following their thesis defense.

MOUNTAIN LAKE MASTER'S DEGREE PROGRAM [Goto TOC]

A candidate for the Master's degree at Mountain Lake must meet the following requirements:

1. Acceptance to the program by the Graduate School of Arts and Sciences and the Department of Biology Graduate Committee.
2. Residence of at least 3 full summer sessions at Mountain Lake Biological Station.
3. Successful completion of 30 hours (4 terms) of graded course work, no more than 6 of which may be Non-Topical Research if the degree involves a thesis.
4. Completion of a library or a laboratory thesis.
5. "Final Examination Form" and thesis defense.
6. Completion of all work within a period of 5 years.