

DEPARTMENT OF BIOLOGY

Colorado State University

Graduate Student Handbook

DEPARTMENT OF BIOLOGY GRADUATE STUDENT HANDBOOK

**Policies and Procedures of the Graduate
Degree Program**

DEPARTMENT OF BIOLOGY

Colorado State University
Biology Building, Room 111
Fort Collins, CO 80523-1878

Revised March 5, 2020

Table of Contents

Part 1: *Information for Students Considering Admission*

Philosophy	1
Admission	1
Financial Aid	1
Residency	2
Degrees	2
Advisor	2
Graduate Advisory Committee	2
Change of Degree Program	3
Course Requirements	3
Quality of Work	3
Teaching Assistantships	3
Tuition	4
Fellowships	4

Part 2: *Information for Students Already Admitted*

Program of Study (GS6 Form)	5
Seminars	5
Research Program	5
Thesis and Dissertation	5
Preliminary and Final Examinations	6
Responsibility	7
Time Schedule	7
Exceptions	7
Graduate Student Association	7
Description of Graduate School Forms	7
Steps Toward the Degree	8
Time Table: MS Degree	8
Time Table: PhD Degree	9

Information for Students Considering Admission

PHILOSOPHY The Department of Biology strives to provide a scholarly environment, where faculty and students are stimulated to become productive scientists. The reputation of a department, and likewise, the initial successes of a student are based, in part, upon the reputation of the faculty. It is expressly the role of faculty to help students realize their highest potential through continued encouragement and example. To inspire individual thinking and imagination, which are so important in the sciences, we encourage variability among the programs of students. The principal aim of the Department's graduate programs is to motivate students to achieve the highest level of their scientific potentials.

ADMISSION To apply for a Masters or PhD in Biological Sciences or a Professional Science Master's degree in Zoo, Aquarium, and Animal Shelter Management, please use the online Graduate Application. <https://gradadmissions.colostate.edu/apply/>

Recommendations concerning acceptance or rejection are made by the Graduate Admissions Committee and by the individual faculty members who are prospective advisors for the applicant. Some students may be required to make up certain academic deficiencies after being accepted for graduate work. Acceptance to the Biological Science Masters and PhD programs is limited by each advisor's ability to take on new students, so it is important for applicants to list and contact their top three prospective advisors via email.

The Department follows the standards for admission outlined in the CSU Graduate and Professional Bulletin. The criteria used in evaluating an application are generally as follows: grades (both trends over time and overall GPA, typically with a 3.0 or above being necessary for acceptance); level of coursework; letters of recommendation; the applicant's statements regarding professional objectives; publications; and other evidence of interest and activity in the biological sciences.

FINANCIAL AID Students wishing to be considered for fellowships, scholarships, research assistantships or teaching assistantships should communicate with their prospective advisor about opportunities and visit the following sites: <http://www.biology.colostate.edu/financial-support/>
<http://graduateschool.colostate.edu/financial/financial-aid-opportunities/>

Students wishing to be considered for a residence hall assistantship should contact the Office of Housing and Residence Education, Palmer Center, 1005 W. Laurel
<https://housing.colostate.edu/?s=resident+hall+assistantship>

Students interested in need-based financial aid, loans, or work-study opportunities should check in with Financial Aid Office. <https://financialaid.colostate.edu/financial-aid-guide/>

RESIDENCY All out-of-state, entering students should establish Colorado residency immediately upon arriving in the state. A person must be domiciled in Colorado for one calendar year, and display physical connections to the state, to be considered a resident for tuition purposes. Physical connections include, but are not limited to, a Colorado driver's license and motor vehicle registration, voter registration, proof of a physical address (e.g., lease agreements), continuous full or part-time employment, and payment of state income tax. These connections have to be made at least one calendar year prior to the beginning of the school term for which residency classification is being sought. New students should plan to arrive at least one week before the start of the semester to ensure time to establish these connections. Rules for establishing residency can be found here: <https://financialaid.colostate.edu/in-state-tuition-requirements/>. Failure to establish residency at the start of the second year of a GTA or GRA appointment can result in the student being responsible for the excess tuition charged above the in-state rate. If a student is unable to petition for Colorado residency due to non-US citizenship or other extenuating circumstances, the situation should be brought to the attention of the Department Graduate Admissions Committee immediately upon arrival at Colorado State University.

DEGREES The Department offers programs leading to the Master of Science and Doctor of Philosophy degrees in Biological Science, and Professional Science Master's degree in Zoo, Aquarium, and Animal Shelter Management. A Master of Science in Biological Science may be earned in either of two programs: "Plan A," with a thesis, or "Plan B," without a thesis. The Professional Science Master's degree in Zoo, Aquarium, and Animal Shelter Management is a Plan C master's degree, which requires primarily coursework. Please see the separate Graduate Student Handbook for the PSM in Zoo, Aquarium, and Animal Shelter Management for more information about the requirements for that program.

ADVISOR For the MS and PhD programs, the faculty member who accepts a graduate student will serve as the student's advisor and must be a tenure-track faculty member in Biology. Selection of an advisor must be mutually satisfactory to the student and the prospective advisor. The advisor-student relationship is perhaps the most important part of the education and training of the graduate student. The mutual respect derived from this relationship strengthens and promotes scientific achievement.

GRADUATE ADVISORY COMMITTEE For the MS and PhD programs, the student and advisor will select faculty members for the student's advisory committee. In addition to the advisor, the committee will have at least 2 additional members for the MS degree and at least 3 additional members for the PhD degree. For rules about committee membership, please visit: <https://graduateschool.colostate.edu/policies-and-procedures/advisor-committee/>. Prior to registering for the 4th semester of classes (but ideally earlier), the major advisor, members of the Graduate Advisory Committee, and the student should discuss the student's proposed graduate program and prepare the formal plan of study (GS6 Form). This committee will consider the student's strengths, weaknesses, and goals in approving the graduate program. A student with a particular weakness may be required to complete, without graduate credit, certain undergraduate courses.

CHANGE OF DEGREE PROGRAM Students enrolled in a program leading to a Master of Science may apply to switch to a Doctor of Philosophy degree program prior to completion of the Master's Degree. Because of the extra demands of the PhD degree, such a change should be carefully considered by the student and must have the approval of the student's Graduate Advisory Committee. A request for change must be made to the department Graduate Admissions Committee for its approval, and a degree change form (GS7 form) must be submitted to the Graduate School. The Graduate Admissions Committee will consider the application for degree change along with any requests for extensions of Teaching Assistantship support to the student.

COURSE REQUIREMENTS For the MS and PhD programs, no specific courses must be taken in satisfaction of Departmental degree requirements; however, the candidate must be able to demonstrate a general knowledge of biology as well as competence in specific areas of concentration. Some students will wish to satisfy course requirements of interdisciplinary programs on campus (e.g., the Cell and Molecular Biology Program and the Graduate Degree Program in Ecology). The student must complete minimum course credit requirements established by the Graduate School for the MS and PhD degrees. These requirements are given in the Graduate and Professional Bulletin: <https://catalog.colostate.edu/general-catalog/graduate-bulletin/>.

QUALITY OF WORK To remain in good standing, a student must maintain a cumulative 3.0 GPA overall and in regular courses (i.e., courses that are not seminars or research credit). Graduate assistants must maintain at least a 3.0 grade point average to be eligible to receive institutional support.

A graduate degree in Biological Science indicates that the individual has achieved a professional level of competence in research as well as formal classwork. Consequently, satisfactory progress in a research program must parallel the effort in coursework.

A graduate student in the Department of Biology should meet with the Graduate Advisory Committee at least once annually, and the student shall submit an annual report of progress toward the degree. A student failing to meet minimal standards of progress and achievement may lose eligibility for institutional support.

TEACHING ASSISTANTSHIPS A Graduate Teaching Assistant is expected to devote an average of 20 hours weekly to departmental duties in order to fulfill the work requirements of the assistantship. GTAs are not automatically granted vacation time. All absences must be cleared with the work supervisor(s) and major advisor.

When admitted with GTA support, MS students are eligible for four semesters of GTA support, and PhD students are eligible for 10 semesters of GTA support. Students who received an MS degree in the Department, and continue towards a PhD degree, are eligible for 6 additional semesters of GTA support as doctoral students.

Students admitted to other degree programs (e.g., the Graduate Degree Program in Ecology or the Cell and Molecular Biology program) whose major professor holds a regular appointment in the Biology Department are eligible to be supported by Biology GTAs, under the same rules that apply to Biological Science students.

Students exceeding the normal period of eligibility for appointment as a teaching assistant may apply for an extension of eligibility. Extension of eligibility will be determined by the Graduate Admissions Committee. **MS students:** The Graduate Admissions Committee must receive a statement from the student's Advisory Committee outlining the program of study that should have been completed in two years and a description of the extenuating circumstances that prevented its completion. The committee should define the remaining requirements for the student's degree, state whether the student is making good progress, and verify that the program will be completed within one year. **PhD students:** In order to receive an extension, the student must have successfully completed their Preliminary Examination. In addition, the Graduate Committee must receive a statement from the student's Advisory Committee describing the extenuating circumstances that prevented the completion of the degree within the specified time allotment. The committee should define the remaining requirements for the student's degree, state whether the student is making good progress, and verify that the program will be completed within one year.

Reappointment as a GTA is not necessarily guaranteed. Appointments are reviewed every semester, and continuance is subject to the availability of the positions, the student's performance as an assistant, and the student's record of scholarship. Faculty supervising GTAs should provide performance evaluations at the end of each semester, and GTAs must solicit student evaluation of their performance in courses to which they have been assigned. It is the responsibility of the GTA to ensure that their credentials are current.

Regular appointments for GTAs will be made on a competitive basis. Special appointments may be awarded opportunistically as special needs arise to fill teaching vacancies on a semester-by-semester basis. Both incoming and currently enrolled graduate students are eligible to compete for regular appointments. The criteria include, but are not limited to: evidence of ability to communicate effectively, evidence of scholarship (undergraduate and graduate GPAs, presentations, publications, letters of reference), performance in teaching, contribution to the academic breadth of the graduate program, contribution to the diversity of the graduate program, and appropriate academic background to match needs for staffing of courses.

TUITION and FEES The department pays tuition for Graduate Teaching Assistants (excluding online courses and differential tuition), and grant funds of the individual advisors typically cover tuition for MS and PhD students who serve as Graduate Research Assistants. Tuition charged will be based on each student's residency status at the beginning of the semester (See Residency section for requirements to establish in-state residency). Due to the cost differential between in-state and out-of-state tuition, the Department has established a policy of paying out-of-state tuition for GTAs for their first year ONLY. If, at the beginning of the second year a student has not established Colorado residency for tuition purposes, the Department will cover only the in-state tuition amount. Any tuition due above this amount will be charged directly to the student. Any exceptions to this ruling, such as GTAs with non-US citizenship, must be cleared through the Graduate Admissions Committee and the Chair before the Department will assume responsibility for more than one year of out-of-state tuition. Payment of fees is the responsibility of the student.

FELLOWSHIPS Students are encouraged to apply for fellowships and scholarships. The Graduate School coordinates some graduate fellowship programs, and the student should consult with the advisor and other mentors to identify appropriate fellowships.

Information for Students Already Admitted

PROGRAM OF STUDY (GS6 FORM) The Program of Study (GS6 Form) must be submitted to the Graduate School prior to registration in the student's the fourth semester. The formal plan will be completed in consultation with the Graduate Advisory Committee. The GS6 Form becomes the "contract" of the student with the Department and University for completion of the graduate program of study. Changes that occur are recorded on additional Graduate School forms: <https://graduateschool.colostate.edu/forms/>.

SEMINARS Seminars provide the opportunity for compiling, digesting, and presenting information of interest to biologists. They are the principal means by which graduate students learn how to think like a biologist. They also are used to present subject matter not covered in other classes. All graduate students may enroll in appropriate seminars as part of their program of graduate study, and are encouraged to attend seminars whether or not they are officially registered for the course. First-year MS and PhD students are expected to attend the first-year graduate seminar.

RESEARCH PROGRAM MS and PhD students should meet with their advisor and Graduate Advisory Committee to outline their research program, ideally in the first year. The research program should be well planned at the start, and the pertinent literature reviewed and understood. Before embarking on research, the student should submit a written proposal to the committee. It is the student's responsibility, in coordination with the advisor, to make certain necessary prior approvals are obtained from University Regulatory Committees. These include (but are not limited to): 1) approval from the Institutional Animal Care and Use Committee for research involving animals, 2) approval from the Radiation Safety Committee for research involving radioisotopes, 3) approval from the Biosafety Committee for the use of biohazards, 4) approval from the Institutional Review Board for research involving humans, including questionnaires. Note that it may take a month or longer to obtain approvals.

THESIS and DISSERTATION A thesis is required for the MS degree (Plan A); a research report is desirable for the Plan B Master's, and may be required by the Graduate Advisory Committee (see the CSU Graduate and Professional Bulletin for specific Plan A and Plan B requirements). A dissertation is required for the PhD degree. Students will submit the final draft of their thesis (or dissertation) to the members of their Graduate Advisory Committee at least two weeks before their oral examination is scheduled. This should be regarded as a minimum period, with more time being desirable to allow the committee ample time to evaluate the thesis. See this site for the steps to format and submit a thesis or dissertation: <http://graduateschool.colostate.edu/current-students/completing-your-degree/thesis-dissertation/>. Any questions concerning the

thesis format should be addressed to a member of the Graduate School staff. The committee may require students to have their results in a form suitable for publication, as long as it complies with the university formatting requirements.

The thesis or dissertation is expected to be a substantive body of work, with a component submitted for publication by the student as first author, ideally prior to graduation. In addition to publishing the results of their research, students are also encouraged to present papers at meetings of scientific societies.

PRELIMINARY and FINAL EXAMINATIONS

MS Degree Final Examination. The Final Examination required for the Master's degree must be held in accordance with the Graduate School deadlines for the particular semester or summer term during which a student wishes to finish. The examining committee is the student's Graduate Advisory Committee with the advisor serving as chair. Additional faculty members may be invited to the Defense of Dissertation and any interested faculty or graduate students may attend. The examination will evaluate the student's knowledge and ability to defend the thesis or research report. The student is responsible for taking the Report of Final Examination (GS24 Form) to the examination and returning it, completed and signed, to the Graduate School Office within two working days after the results are known. A candidate who fails the Final Examination may be reexamined with permission of the committee. The reexamination must be held not earlier than two months, or later than twelve months, after the date of the failure.

PhD Degree Candidacy. A student is considered to be a candidate for a PhD degree by the Biology Department if matriculated and either having a Master's Degree or having completed 30 credits towards a PhD degree.

Preliminary Examination. A student pursuing the PhD degree must pass a Preliminary Examination at least two terms prior to the final examination. The Preliminary Examination shall be administered to determine whether the student is qualified to continue toward the Doctorate. The format of the exam, including oral and written components, must be decided by and agreed upon by the Graduate Advisory Committee. These examinations will assess the student's adequacy of knowledge and ability to handle concepts and synthesize material. Prior to the examination, the graduate student shall obtain a copy of the GS16 Form from the Graduate School Office on which the Graduate Advisory Committee reports the results of the examination. The Graduate School must receive this form within two working days after the results of the examination are known.

If recommended by Advisory Committee, a student who fails the Preliminary Examination may be granted one additional examination, to be taken not earlier than two months, nor later than twelve months, after the first, and upon satisfactory completion of such additional study as may be recommended by the Graduate Advisory Committee.

Defense of Dissertation (Final Examination). The Final Examination required for the PhD degree must be held in accordance with the Graduate School deadlines for the particular semester or summer term during which a student wishes to finish. Normally, the final examination will cover primarily the dissertation, but additional subject matter, specified by the committee, may also be covered. The faculty in Biology requires that all PhD candidates present a public seminar

embodying the final results of the doctoral research program, which should be announced to members of the Biology Department at least one week in advance of the seminar. The Defense of Dissertation is conducted by the student's Graduate Advisory Committee with the advisor as chair. Additional faculty members may be invited to the Defense of Dissertation and any interested faculty or graduate students may attend. The chairperson of the Advisory Committee will have the prerogative to decide whether those in attendance (outside of the committee) should be allowed to ask questions of the candidate during the examination. The Defense of Dissertation will primarily concern the dissertation.

Candidates who fail their defense of dissertation may present themselves, with permission of the committee, for one additional reexamination not earlier than two months, nor later than twelve months, after the date of the failure.

RESPONSIBILITY It is the joint responsibility of the student and the advisor to see that all requirements are completed fully and on time, so that no oversight delays a student's graduation; however, the final responsibility falls on the student to see that all requirements have been met.

EXCEPTIONS In cases where a particular requirement imposes undue hardship on a student, the student's Graduate Advisory Committee may petition the Department for permission to waive that requirement.

GRADUATE STUDENT ASSOCIATION The purpose of this Association is to organize student activities and serve as a liaison between the graduate students and faculty on matters of departmental concern. Below is a partial list of representative accomplishments and activities of graduate students in the Department of Biology:

1. Represent graduate student interests and concerns on Departmental committees for which graduate student representation is requested or required.
2. Planning of social functions.
3. Interaction with CSU Graduate Student Council and Natural Sciences Student Council in matters that directly concern Biology graduate students.

DESCRIPTION OF GRADUATE SCHOOL FORMS For a description of Graduate School forms, see this page: <https://graduateschool.colostate.edu/forms/>

Some of the most commonly used Graduate School forms include:

- GS6 Program of Study: To identify committee members and plan graduate coursework
- GS7 Request of Change of Department and/or Degree Program: To change department or degree program
- GS9A Petition for Committee Member Changes: To add, delete or substitute committee members listed on GS6 prior to final exam
- GS16 Report of Preliminary Examination for the PhD Degree: To report results of the Preliminary Exam (doctoral students only)
- GS24 Report of Final Examination Results: To report results of the Final Examination
- GS25 Application for Graduation: To declare intent to graduate and adjust program of study

- GS26 Request for Letter of Completion: To receive a letter confirming that the degree requirements have been met, after final graduation approval has been cleared and prior to the degree being recorded on official transcripts
- GS30 Thesis/Dissertation Submission: To document the approval of the thesis/dissertation by the committee
- GS31 ETD Embargo Restriction Request: To delay the public release of the thesis/dissertation

STEPS TOWARD THE DEGREE

For a description of the steps toward a Master's Degree, see this page:

<https://graduateschool.colostate.edu/current-students/steps-to-your-masters-degree/>

For a description of the steps toward a PhD degree, see this page:

<https://graduateschool.colostate.edu/current-students/steps-to-your-phd-degree/>

TIME TABLE: MS DEGREE

DATE	STEPS
Prior to Graduate Teaching Assistant workshop	Arrival at CSU
Before 4 th regular semester registration (ideally early in 2 nd semester)	Advisory Committee selected
At discretion of student, advisor, and advisory committee	Advisory Committee meeting
Before 4 th regular semester registration	Program of Study (GS6)
Before end of 2 nd semester	Written research proposal
Prior to initiation of research	Research approvals from university regulatory committees
By 6 th week of Fall or Spring semester; 1 st week of 8-week Summer session	Application for Graduation (GS25)
2 weeks before Final Examination	Thesis (or Report for Plan B) to committee
1 week before Final Examination	Notify department of Final Examination or Defense
Prior to end of 12 th week of graduating term for fall and spring semester; prior to end of 5 th week of 8-week summer term	Final Examination or Defense
Within 2 working days following Final Examination	Report of Final Examination (GS24) submitted to Graduate School
By deadline date for semester of graduation	Submit thesis and GS30 (not required for Plan B)
Before leaving	Key check-in

TIME TABLE: PhD DEGREE

DATE	STEPS
Prior to Graduate Teaching Assistant workshop	Arrival at CSU
Before 4 th regular semester registration (ideally early in 2 nd semester)	Advisory Committee selected
At discretion of student, advisor, and advisory committee	Advisory Committee meeting
Before 4 th regular semester registration	Plan of Study (GS6)
Before end of 2 nd semester	Written research proposal
Prior to initiation of research	Research approvals from university regulatory committees
2 terms prior to Final Examination	Preliminary Examination
Within 2 working days following Preliminary Examination	Report of Preliminary Examination (GS16) submitted to Graduate School
By 6 th week of Fall or Spring semester; 1 st week of 8-week Summer session	Application for Graduation (GS Form 25)
2 weeks before Final Examination	Thesis to committee
1 week before Final Examination	Notify department of Final Examination and public seminar
Prior to the end of 12 th week of graduating term for fall and spring semester; prior to the end of the 5 th week of eight-week summer term	Final Examination or Defense of Dissertation
Within 2 working days following Final Examination	Report of Final Examination (GS24) submitted to Graduate School
By deadline date for semester of graduation	Submit thesis and GS30 (not required for Plan B)
Before leaving	Key check-in

This handbook is supplemental to the CSU General Catalog and the Graduate and Professional Bulletin. Carefully read the regulations and requirements in both of these.