Department of Ecology and Evolutionary Biology Graduate Student Handbook 2015-2016





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For New Students

Overview

Welcome to EEB! This handbook has two purposes: to help you get oriented to the department when you first arrive and to serve as a reference throughout your graduate career.

The department of Ecology & Evolutionary Biology (EEB) is one of three biology departments at the University of Connecticut and currently includes approximately 30 faculty members, 60 graduate students and a number of postdocs. Most faculty are based on the Storrs campus, but the department does include professors who teach at other campuses within the UConn system. EEB shares responsibilities for undergraduate biology teaching with the other two biology departments - Molecular & Cell Biology (MCB) and Physiology & Neurobiology (PNB) - and certain administrative functions are also shared among the three departments. These shared functions are run through Biology Central Services (BCS).

The EEB department is spread across three buildings on North Eagleville Road. The Torrey Life Science (TLS) building houses the department offices, the Biology Central Services (BCS) office, the department's main conference room (the Bamford Room, TLS 171B), several teaching labs, and the labs and offices of about half the department's faculty. Floors 2-5 of the north wing of the BioPharm Building (PBB) are home to labs and offices of most other EEB faculty, and to small conference rooms (known locally as the BioPharm "fishbowls") on the second and third floors. Finally, the Biology/Physics building (BPB) contains the departmental collections facility, two large lecture halls used for departmental seminars and undergraduate lecture classes, and research greenhouses on the roof. In between these three buildings lies another set of greenhouses, which contain the department's live plant collection.

The department is currently led by Department Head, Carl Schlichting, and Associate Department Head, Pam Diggle. There are several key support staff that new students should get to know soon after arriving: Anne St. Onge is the Graduate Coordinator for all three biology departments and is an invaluable source of advice on student pay and questions relating to the Graduate School. Kathy Tebo is the EEB Administrative Assistant and Pat Anderson the EEB Business Services Supervisor; they can answer many questions specific to EEB. Finally, Lois Limberger is in charge of BCS Employment and Payroll and will be an important point of contact for international students who have visa, payroll, or tax questions.

Like any department, EEB has many faculty committees, most of which have little bearing on graduate students. The main exception is the Graduate Admissions and Awards Committee (GAAC). This committee oversees the admissions process, makes teaching assistantship (TA) assignments, and administers departmental fellowships and summer support. The current cochairs of the committee are Dave Wagner and Elizabeth Jockusch.

Information that's helpful to know before you arrive

You should plan to arrive in Storrs at least a week before the semester begins, to complete the graduate student orientation and generally get situated before classes start.

There is now a graduate school-wide <u>orientation program</u> with special sessions for international students, teaching assistants (TAs), and new graduate students in general, with different sessions focusing on things like health insurance, the writing center, professional preparation, etc. The sessions aimed at TAs are mandatory for students to complete before they start teaching. If you are supported on a research assistantship (RA), or in some other way, you may delay taking this orientation.

If you have questions, Anne St. Onge, Kathy Tebo, and your advisor are a good place to start, depending on the kind of question. New lab mates or other graduate students are also happy to help.

TA assignments will be sent by email about a month before the semester begins. We strongly encourage you to get in touch with the course or lab instructor once you know your assignment. Procedures for assigning specific sections in courses with multiple TAs vary; watch for an email from the course instructor requesting your schedule information and preferences.

It is important to register for at least the required number of class credits (6 for students on a TA/RA; 9 for students on fellowship) before the first day of classes—this will ensure that your tuition waiver gets applied and that you receive a copy of your fee bill before it is due. Your advisor will have some ideas about what courses might be good for you. Note that these 6 or 9 credits include your "research credits". Students are recommended to register for GRAD 5950 (Master's) or GRAD 6950 (Doctoral) rather than EEB 5859. Register for the section that corresponds to the number of credits you need (e.g., section 02 for two credits). Also note that you are not supposed to register for more than 6 research credits without special permission. More detailed information on registering is included below under 'how to register and pay your bill'.

UConn and the Department will use your official UConn email to communicate with you—so start using that account as soon as you can.

Additional Information for INTERNATIONAL STUDENTS

The International Student and Scholar Services Office is your primary source of help and information. You should call or email this office for any questions or help that involve your status as a foreign student. It is also a good idea to talk to other international students here or in other departments, so that they can provide guidance about what you may need, or not need, to insure you don't run into any unexpected problems. Money, visas, taxes, special funding, etc. are all things that other more experienced students are apt to have already dealt with. It is also important to make sure you have all the required vaccinations before you arrive - the required information can be obtained through Student Health Services.

If you will be a teaching assistant, there is a multi-day workshop for new international graduate students scheduled for August. For more information see the ITAP web site. Students who do not have English as a first language will have to take a proficiency exam.

As you will be earning money in the United States, you will have to pay taxes both to the Internal Revenue Service (IRS) of the U.S. government and to the state of Connecticut. These taxes are taken out of your pay every pay period and you have to file income tax forms by April 15 every year. If you are paying U.S. taxes for the first time, get started early on the forms. The International Student Office arranges tax workshops, but it is up to you to find out when they are and to attend if you desire assistance. These sessions are very useful, and will make your life much easier.

If you are interested in renting an apartment near campus, it is a good idea to email a current graduate student, who can send an email out to the departmental listserv. There are often other students who are looking for housemates. Popular places to stay are in Storrs itself, elsewhere in Mansfield, or in the town of Willimantic, which is a few miles away.

Other information about how to navigate being a student in a new country and advice on such as how to obtain a Social Security number, set up a bank account, get a driver's licence, buy a car, etc. can often be obtained by talking with other graduate students (e.g., the EEB graduate student association maintains an online document providing salient advice to other graduate students).

EEB Graduate Programs

The department sponsors four graduate degree programs:

- PhD in Ecology and Evolutionary Biology
- MS in Ecology and Evolutionary Biology (plan A, thesis-based)
- MS in Ecology and Evolutionary Biology (plan B, coursework based)
- MS in Biodiversity and Conservation Biology (plan B, includes internship and research components; usually pursued as an integrated BS/MS)

The dates for completing benchmarks for each program are summarized in the following table (values are semesters), and discussed in detail below. Each of the key benchmarks included in the table should be completed by the end of the named semester after matriculation (- e.g., '3rd' means by the end of your 3rd semester in EEB). All students also should plan to meet with their full advisory committee at least annually.

	PhD	MS (Plan A)	MS (Plan B, EEB)	BS/MS (Plan B, Biodiversity)
Form provisional committee	1st	1st	NA	NA
Formalize committee	3rd	2nd	1st	1st
Plan of Study	3rd	2nd	1st	1st
General Exam	4th	N/A	N/A	N/A
Prospectus	5th	N/A	N/A	N/A
Defense/Final examination	10th	4th	4th	4th

N/A = not applicable

Students will complete the following requirements and meet each benchmark by the stated times. Exceptions will be allowed as detailed in the program descriptions below; in addition, any leave of absence approved by the Graduate School stops the clock on all items for the duration of the absence. Students also are responsible for ensuring that all Graduate School requirements are met; should discrepancies arise between this document and the graduate catalog then the latter takes precedent. Any such discrepancies should be reported to the Graduate Admissions and Awards Committee (GAAC) so that this document can be updated.

A major goal for any student conducting research is to make important scientific discoveries. These discoveries will only be known to the scientific community at large if you publish your results in scientific peer-reviewed journals. Published research is also a key metric by which researchers are judged throughout their careers. So, from the minute you walk in the door, start thinking about ways to publish your work and to start generating publications early, rather than stockpiling results and writing everything up in your last year. Developing a strategy that leads to publications throughout your graduate career will make the writing of your thesis or dissertation much easier and will also make you more competitive for jobs once you are done.

PhD Program: Departmental Expectations and Requirements

SKILLS

By the time they complete their degree, EEB PhD students should be able to:

- 1. Develop novel research questions and place their significance in the context of the biological sciences.
- 2. Design and successfully implement a research plan that addresses their research questions, demonstrating mastery of experimental design, quality control, troubleshooting, data management and organizational skills.
- 3. Write grant proposals, know the primary funding sources for research in EEB, understand how grants are managed, and be able to develop a research budget.
- 4. Present their research to peers via talks, posters, and in the form of scientific publications.
- 5. Understand the publication process, including journal selection, paper submission, and how to conduct peer review.
- 6. Communicate their research beyond their peers to a broader public.
- 7. Articulate the broader impacts of their research program.
- 8. Understand and abide by the legal and ethical expectations placed on scientists.
- 9. Teach undergraduate students within the field of EEB.
- 10. Although EEB does not have a foreign language or related areas requirement, student committees may have this requirement for particular students. For example, a language requirement might be applied to a student working in a foreign country.

KNOWLEDGE

By the time they complete their degree, EEB PhD students should:

- 1. Know the fundamentals of ecology, evolutionary biology, and systematics.
- 2. Have an understanding of the general biology of a broad range of organisms.
- 3. Know the history of research within their sub-discipline, as determined by the student's committee.
- 4. Have quantitative skills appropriate to their sub-discipline, as determined by the student's committee.
- 5. Have depth and breadth of knowledge appropriate to their sub-discipline, as determined by the student's committee.

TIMELINE AND KEY MILESTONES

1. Form a provisional committee of at least 3 faculty members, including the major advisor, before the start of the second semester.

Each student is required to form an advisory committee that will guide them through their degree. Membership of the committee should be determined in consultation with your major adviser. Committee members must be members of the graduate faculty at UConn. If one of your

proposed committee members is not at UConn, they can be added to the Graduate Faculty by submitting a form available on the Graduate School web site.

The role of this committee is solely to guide the student's initial course selection and to help them begin planning their research. Committee members may be added or removed at any time, and changes are especially encouraged when they accommodate changes in research direction. Provisional committee members do not need to be on the student's final dissertation committee.

2. Finalize committee membership and submit a plan of study to the Graduate School before the end of the third semester.

After committee membership has been formalized, subsequent changes in membership remain possible and are encouraged when they will help the student meet their research goals. Similarly, changes to the plan of study are encouraged when they will improve the student's ability to conduct their planned research. Changes at this stage will require the approval of appropriate paperwork through the Graduate School.

Each student is required to submit a plan of study to the Graduate School. The plan of study should identify any courses that the department or the student's committee requires the student to take in order to complete their degree. The student should consult the graduate catalog to ensure that the plan is compliant with Graduate School requirements.

3. Meet with their committee at least annually.

The student should meet with their provisional committee before the start of their second semester to initiate discussions about their research directions and plan of study. Thereafter, they should meet annually to update their committee on their progress and to discuss future plans.

4. Take their general exam before the end of the fourth semester.

All students must complete an oral general exam. The purpose of this exam is to assess a student's understanding of the fundamentals of their field and the general information necessary to complete their graduate training and dissertation research, as determined by the five members of their examination committee. The exam committee is charged with using the exam to help the student to identify areas of strength and any remaining areas of weakness. Wideranging weaknesses will result in failure, but the committee has the option of addressing less serious/more narrowly-defined weaknesses by requiring the student to undertake additional study (e.g., classes, committee-defined assignments, etc.) and/or a follow-up exam in a format that they consider appropriate.

Each student should consult with their committee members well in advance of the exam (at least 3-6 months) for advice on how to prepare, in order to make the exam a productive exercise. The departmental norm for the oral exam is to begin with the student giving a short (maximum of 15 min) overview of their research interests. An initial round of questioning focused on the presentation should also be short. This round of questions should be followed

by more general questions from each committee member in turn. Exams should not last longer than 3 hours.

A student may request a one semester extension of the general exam deadline, which can be granted by their committee. For extensions beyond the fifth semester, a student must apply to the GAAC, which will consult with the student's committee in deciding whether to approve the request. Except in cases of emergency, requests for extensions should be submitted by the beginning of the semester in which the exam should be taken. Students should note that unapproved extensions may affect continued departmental funding of the student (e.g., TA support, eligibility for departmental awards).

5. Defend in a committee meeting and then submit a dissertation proposal before the end of the fifth semester.

The dissertation proposal should outline the research that the student plans to conduct, place that work in the context of previous work in their field, and demonstrate how the proposed work will contribute new knowledge in their field. It is recommended that the document include an introductory literature review, a description of methods, a time-line, a summary of proposed chapters, and a discussion of the work's significance. The proposal should be no more than 10 pages long (excluding references).

Once individual committee members have approved a proposal, the student should arrange a meeting at which the proposed work is presented to the committee and to two outside reviewers (these need not be EEB faculty, but must be approved by the department head). The intent of this meeting is to allow the student to benefit from the synergistic discussions that often emerge from committee members hearing each other's questions and suggestions. Faculty participation via video conference is acceptable, and external reviewers are encouraged. The meeting should begin with the student giving a ~30 min presentation of their research plans, which will be followed by discussion. The prospectus should be distributed at least a week before the meeting date. If two non-committee members are unable to participate in the proposal review, then the proposal must be sent out for additional review in order to meet Graduate School rules. Students should consult the graduate catalog in order to ensure that they meet all Graduate School requirements for the proposal submission.

A student may request a one semester extension of the proposal deadline, which can be granted by their committee. For extensions beyond the sixth semester a student must apply to the GAAC, which will consult with the student's committee in deciding whether to approve the request. Except in cases of emergency, requests for extensions should be submitted by the beginning of the semester in which the proposal is due. Students should note that unapproved extensions may affect continued departmental funding of the student (e.g., TA support, eligibility for departmental awards).

6. Distribute complete draft dissertation chapters to committee at least three weeks prior to defense exam.

In order to receive helpful feedback from the advisory committee it is important for a student to consult with them throughout the writing period. Once the student has a final draft of the dissertation, they should distribute it to all committee members and anyone else who will participate in the examination (closed door) portion of the defense.

7. File Dissertation Tentative Approval Page with Graduate School and announce the oral portion of your defense via the University Events Calendar at least two weeks prior to defense exam.

These two items are university-wide requirements. Be sure to review the Graduate School web site for details on how to do these things and for any other dissertation-related requirements imposed by the university. Note that the Approval Page indicates that your committee has tentatively approved the dissertation, which is why it is essential that they receive a complete draft at least 3 weeks before the defense exam (see above).

8. Complete defense (recommended: before the end of the tenth semester).

Departmental support for students is guaranteed for up to 5 years from the date of matriculation, subject to the continued availability of funds, satisfactory performance as a graduate assistant, and satisfactory progress towards degree completion. Students should, therefore, plan to complete their dissertation defense/examination within this time frame. Requests for support beyond the 10th semester after matriculation should be submitted to the GAAC, along with a written statement of the student's progress, details of work that remains, and a timeline for completion. The GAAC will consult with the student's committee in deciding whether to extend support. An initial extension can be granted for up to a year; thereafter extensions will be granted only after additional review and on a semester-by-semester basis.

The defense presentation should be scheduled for a 60 min period in which the student gives a talk and takes questions from a general audience. This presentation will be followed by a closed door session with at least 5 faculty in attendance (i.e., the student's committee plus additional faculty if the committee has fewer than 5 members). The defense must take place at least two weeks prior to the end of the semester in which the student plans to graduate.

MS Program (Plan A, thesis-based): Departmental Expectations and Requirements

SKILLS

By the time they complete their degree, EEB MS students should be able to:

- 1. Successfully implement a research plan that addresses a research question, demonstrating mastery of experimental design, quality control, troubleshooting, data management and organizational skills.
- 2. Place the significance of their research in the context of the biological sciences.
- 3. Be familiar with the primary funding sources for research in EEB, understand how grants are managed, and be able to develop a research budget.
- 4. Present their research to peers via talks, posters, and in the form of scientific publications.
- 5. Understand the publication process, including journal selection, paper submission, and the role of peer review.
- 6. Communicate their research beyond their peers to a broader public.
- 7. Articulate the broader impacts of their research program.
- 8. Understand and abide by the legal and ethical expectations placed on scientists.
- 9. Teach undergraduate students within the field of EEB.

KNOWLEDGE

By the time they complete their degree, EEB MS students should:

- 1. Know the fundamentals of ecology and evolutionary biology.
- 2. Have an understanding of the general biology of a broad range of organisms.
- 3. Know the history of research within their sub-discipline, as determined by the student's committee.
- 4. Have quantitative skills appropriate to their sub-discipline, as determined by the student's committee.
- 5. Have depth and breadth of knowledge appropriate to their sub-discipline, as determined by the student's committee.

TIMELINE AND KEY MILESTONES

1. Form a provisional committee of at least 3 faculty members, including the major advisor, before the start of the second semester.

Each student is required to form an advisory committee that will guide them through their degree. Membership of the committee should be determined in consultation with your major adviser. Committee members must be members of the graduate faculty at UConn. If one of your proposed committee members is not at UConn, they can be added to the Graduate Faculty by submitting a form available on the Graduate School web site.

The role of this committee is solely to guide the student's initial course selection and to help them begin planning their research. Committee members may be changed at any time, and

changes are especially encouraged when they accommodate changes in research direction. Provisional committee members do not need to be on the student's final thesis committee.

2. Finalize committee membership and submit a plan of study to the Graduate School before the end of the second semester.

After committee membership has been formalized, subsequent changes in membership remain possible and are encouraged when they will help the student meet their research goals. Similarly, changes to the plan of study are encouraged when they will improve the student's ability to conduct their planned research. Changes at this stage will require the approval of appropriate paperwork through the Graduate School.

Each student is required to submit a plan of study to the Graduate School. The plan of study should identify any courses that the department or the student's committee requires the student to take in order to complete their degree. The student should consult the graduate catalog to ensure that the plan is compliant with Graduate School requirements.

3. Meet with their committee at least annually.

The student should meet with their provisional committee before the start of their second semester to initiate discussions about their research directions and plan of study. Thereafter, they should meet at least annually to update their committee on their progress and to discuss future plans.

4. Distribute complete draft thesis chapters to committee at least two weeks prior to defense exam.

In order to receive helpful feedback from the advisory committee it is important for a student to consult with them throughout the writing period. Once the student has a final draft of the thesis, they should distribute it to all committee members so that they have ample time to review it prior to the defense.

5. Complete thesis (recommended: before the end of the fourth semester).

Departmental support for students is guaranteed for up to 2 years from the date of matriculation, subject to the continued availability of funds, satisfactory performance as a graduate assistant, and satisfactory progress towards degree completion. Students should, therefore, plan to complete their thesis, present their thesis research to the department, and take their final examination within this time frame. Requests for support beyond the 4th semester after matriculation should be submitted to the GAAC, along with a statement of the student's progress, details of work that remains, and a timeline for completion. The GAAC will consult with the student's committee in deciding whether to extend support. All extensions will be granted only after review and on a semester-by-semester basis.

The defense presentation should be scheduled for a 60 min period in which the student gives a talk and takes questions from a general audience. This presentation will be followed by a closed door session with the student's committee. The defense must take place at least two weeks prior to the end of the semester in which the student plans to graduate.

MS Program (Plan B, coursework): Departmental Expectations and Requirements

Plan B MS degrees are uncommon in EEB and there are no specific departmental requirements beyond those set by the Graduate School. A minimum of 24 course credits is required. Students should consult with their graduate committee as early as possible to develop a plan of study.

TIMELINE AND KEY MILESTONES

1. Form a committee of at least 3 faculty members, including the major advisor and submit a plan of study to the Graduate School before the start of the second semester.

Each student is required to form an advisory committee that will guide them through their degree. Membership of the committee should be determined in consultation with your major adviser. Committee members must be members of the graduate faculty at UConn. If one of your proposed committee members is not at UConn, they can be added to the Graduate Faculty by submitting a form available on the Graduate School web site.

Each student is required to submit a plan of study to the Graduate School. The plan of study should identify any courses that the student's committee requires the student to take in order to complete their degree. The student should consult the graduate catalog to ensure that the plan is compliant with Graduate School requirements.

After committee membership has been formalized, subsequent changes in membership remain possible and are encouraged when they will help the student meet their goals. Similarly, changes to the plan of study are encouraged when they will improve the student's ability to obtain suitable training to meet their career goals. Changes at this stage will require the approval of appropriate paperwork through the Graduate School.

2. Meet with their committee at least annually.

The student should meet with their provisional committee before the start of their second semester to develop a plan of study. Thereafter, they should meet at least annually to update their committee on their progress and to discuss future plans.

3. Successfully complete a final oral exam.

Early in their fourth semester, the student should schedule a final exam with members of their graduate committee. The exact format and content of the exam will be set by the committee and the student should seek advice from their advisor about how to prepare. Exams typically last 1-2 hours and focus largely on material covered during the student's coursework.

BS/MS Program in Biodiversity and Conservation Biology: Departmental Expectations and Requirements

The BS/MS program was designed to allow UConn undergraduates to obtain a joint BS/MS degree through an integrated 5-year plan of study. The program was designed to prepare students for careers that require the application of knowledge about biodiversity and conservation biology in a wide variety of vocational settings. Coursework requirements are detailed and combine education in ecology, evolution, systematics, and natural history, with relevant training in additional topics (e.g., public policy, economics, ethics, GIS). Students who already hold a BS degree, from UConn or elsewhere, can also enter the program to get just the non-thesis (Plan B) MS degree. This handbook covers only requirements for the MS portion of the joint BS/MS program in Biodiversity and Conservation Biology; for additional details, see the program web site on the EEB homepage. Note that the BS/MS program is overseen by its own advisory committee, which is separate from the GAAC. The chair of this committee is currently Eric Schultz.

TIMELINE AND DEGREE REQUIREMENTS

1. Gain formal admission to the program.

Students must apply and be granted admission to the Graduate School (see information on admissions policies on the BS/MS web site) before they can attain the MS degree. At least one semester of enrollment in the program as a graduate student is required to attain the MS degree.

2. Form a committee of at least 3 faculty members, including the major advisor and submit a plan of study to the Graduate School before the start of the second semester.

Before admittance to the program each student must select a major advisor, who will guide them through their degree. Each student's advisory committee is formed after consultation between the student and the major advisor and includes two associate advisors. The major advisor and at least one associate advisor must be a member of the Graduate Faculty. One Associate Advisor may be chosen from outside the University in accordance with Graduate School procedures.

The student must prepare a plan of study containing the courses he or she will take to gain mastery of the body of knowledge in the field, including the required or core courses, the elective courses, and the related courses. The student's advisory committee must approve the plan of study and copies with original signatures should be given to the Graduate School and the Program Coordinator.

Failure to form an advisory committee or submit a plan of study in a timely fashion will provide grounds for removal from the program.

3. Complete required coursework

I Credit requirements

27 total credits. These credits will include at least 14 credits of course work, exclusive of the related or supporting area and the required research and internship credits. No course may be used to fulfill requirements of both the BS and the MS degrees.

Il Course requirements (*course taught only in alternate years)

- 1. EEB 5310 Conservation Biology (3 credits)*
- 2. EEB 5369 Current topics in Biodiversity (1 credit)
- 3. EEB 5370 Current topics in Conservation Biology (1 credit)
- 4. EEB 5301 Population and Community Ecology (3 credits)*
- 5. EEB 5348 Population Genetics (3 credits) OR EEB 5449 Evolution (3 credits)*
- 6. EEB 5347 Principles and Methods of Systematic Biology (4 credits) OR one of the following taxonomic diversity courses (NOTE: no more than six credits of coursework below the 5000-level may be used to fulfill graduate requirements):

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EEB 3271 Plant Systematics (4 credits)
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EEB 4200 Biology of Fishes (4 credits)

EEB 4243 Insect Classification and Identification (4 credits)

EEB 4250 General Entomology (4 credits)

EEB 4252 Field Entomology (4 credits)

EEB 4260 & 4261 Ornithology & Ornithology lab (4 credits)

EEB 4272 The Summer Flora (3 credits)

EEB 4274 Introduction to Animal Parasitology (4 credits)

EEB 4275 Invertebrate Zoology (4 credits)

EEB 5204 Aquatic Plant Biology (4 credits)

EEB 5220 Evolution of Green Plants (3 credits)

EEB 5240 Biology of Bryophytes and Lichens (4 credits)

EEB 5250 Biology of the Algae (4 credits)

EEB 5254 Mammalogy (4 credits)

EEB 5265 Herpetology (4 credits)

EEB 5459 Aquatic Insects (3 credits)

EEB 5477 Insect Phylogeny (3 credits)

If a required course cannot be taken for reason(s) beyond control of the student's, a substitute course may be taken with prior permission from the student's advisory committee. Permissions for substitution will be granted only in response to unforeseeable events (e.g., a course is cancelled at short notice), and not in cases of failure to plan ahead.

Related Area Courses: Students are required to take at least 6 credits of coursework in the related fields of Environmental Policy or Ethics, Environmental Economics, and Geographic Information Systems (GIS). At least one course from each of two of the three sets of courses listed below must be taken to fulfill this requirement. If students have already taken a course

from one area as part of their BS, they are encouraged (but not required) to take their MS courses from the other two areas. Students should be aware that some of these courses may require prerequisites.

7. One of the following courses in Environmental Policy or Ethics:

ARE 3434 Environmental and Resource Policy (3 credits)

NRME 3245 Environmental Law (3 credits)

PHIL 3216 Environmental Ethics (3 credits)

Any other graduate level course (3+ credits) that relates to Environmental Policy and Ethics and that is approved by the student's committee

8. One of the following courses in Environmental Economics*:

ARE 4462 Environmental and Resource Economics (3 credits)

ARE 4438 Valuing the Environment (3 credits)

ARE 5464 Benefit-Cost Analysis and Resource Management (3 credits)

Any other graduate level course (3+ credits) that relates to Environmental Economics and that is approved by the student's committee

9. One of the following courses in Geographic Information Systems (GIS):

GEOG 4500 Introduction to Geographic Information Systems (4 credits)

GEOG 4510 Applications of Geographic Information Systems (4 credits)

GEOG 4520 Selected Topics in Geographic Information Systems (2 credits)

GEOG 5500 Fundamentals of Geographic Information Systems (var credits)

GEOG 5510 Applications Issues in Geographic Information Systems (3 credits)

NRME 3535 Introductory Remote Sensing (3 credits)

NRME 4535 Advanced Remote Sensing (3 credits)

NRME 5325 Geospatial Data Processing Techniques (3 credits)

NRME 5575 Natural Resource Applications of Geographic Information Systems (3 credits)

Any other graduate level GIS course (3+ credits) that is approved by the student's committee

III. Research requirement

The degree requires at least 4 credits of Master's research experience (EEB 5889). Since the BS/MS program is not a Plan A thesis MS, students are not required to develop their own research project and no formal thesis is required. To demonstrate proficiency, students are expected to write a short paper (2 or more pages) summarizing the project they worked on and its broader significance. The paper should cover (a) why the work was conducted, (b) how it was conducted and what the student's role was, (c) what the research revealed, and (d) the significance of the results. The paper should be written as though for a general, but informed, audience (e.g., a likely future employer). The background information and significance section should reference relevant literature. This paper must be approved by the student's committee before the final examination date is set. Students should be able to talk about their research

experience in an informed way appropriate to an MS student, and be prepared to answer questions about their research experience during their final examination.

Students are encouraged to obtain this research experience off-campus, perhaps in association with the internship component of their degree program. If a student has gained substantial research experience as an undergraduate they may petition their committee to take other graduate level courses, or an additional internship, instead of an additional 4 research credits. "Substantial" research experience means work appropriate to that of a graduate student (e.g., research leading to a substantial undergraduate thesis, a first-authored publication, or equivalent). Students who wish to make this petition are still required to write a short paper summarizing their prior research (following the guidelines described above) and must provide justification for taking the alternative course(s). The decision to accept the petition lies with the student's committee, but copies of the paper and justification should be sent to the Program Coordinator.

IV. Internship

Students are required to participate in at least one internship, of no less than two months total duration, with an appropriate agency over the course of their degree program. This internship component is designed to provide students with experience in the practical applications of biodiversity and/or conservation. Examples of appropriate host agencies can be found on the BS/MS web site. Students may obtain credit for this internship by registering for EEB 5891; each credit of internship will entail at least 42 hours of work per semester or term. No more than 15 credits of internship work will be counted towards the BS portion of the proposed BS/MS degree.

4. Successfully complete a final oral exam.

The final examination is taken near the close of the candidate's period of study, no later than one year after the completion of coursework as contained in the Plan of Study. The internship and research requirement must be satisfied before the final examination can be taken. No fewer than three faculty members, including all members of the candidate's advisory committee, participate in the oral examination. At minimum, the final exam will consist of questions based on the student's coursework, research and internship experience, and the application of the acquired knowledge to the student's proposed career. Students should schedule this exam with members of their graduate committee as early as possible in their final semester. The exact format and content of the exam will be set by the committee and the student should seek advice from their advisor about how to prepare. Exams typically last 1-2 hours and focus largely on material covered during the student's coursework, often with questions tailored to the student's proposed career path.

Acceptable Progress (for all degree programs)

The department considers all students who have the support of their advisor and advisory committee, have completed the appropriate benchmarks for their career stage, and are within the timeframe specified for their degree program (including those who have had 1-semester extensions granted by their committees or longer extensions approved by the Graduate Admissions and Awards Committee) to be making satisfactory progress. Your annual committee meeting is a good place to review your academic progress and establish goals for the upcoming year.

Switching Degree Programs

Between MS programs: Students who wish to switch between MS programs must obtain the consent of their committee, notify Kathy Tebo and the Graduate Admissions and Awards Committee, and complete the appropriate paperwork through the graduate school.

MS to PhD: Students who complete their MS at UConn and wish to remain for a PhD should apply to the PhD. program on the same schedule as other applicants. Students who are admitted to the MS program and wish to switch to the PhD program without completing their MS must also formally apply to the PhD program on the same schedule as other applicants. Note that students who complete a thesis-based MS degree generally have their support clocks "reset" upon entering the PhD program, such that a student is eligible for 2 years of support for the MS program and another 5 for the PhD program. Students who enter the PhD program without completing their MS degree, generally have their support clock extended to a total of 5 years of support from their initial matriculation into the MS program.

PhD to MS: Students who enter the PhD program and wish to switch to an MS program should obtain the approval of their committee and then consult with Anne St. Onge about completing the appropriate procedures through the Graduate School. If the student has completed their general exam, their committee has the option of using this to satisfy the MS exam requirement.

Financial support when switching programs: Switches between programs may affect the award of TAships or other forms of financial support. Students switching from a research-based degree to a coursework degree generally are no longer offered TA positions. Additional review by the GAAC is required for any student switching from a program that does not come with a guarantee of support to one that does, if the student wishes to receive support in the form of a departmental TA at any point in their new program. This review should take place at the time that the switch between programs is made.

Courses and Seminars

Finding Out About Courses

The directory of classes (available on the Registrar's web page) will be your main source of information about courses, but there are often courses and seminars available that are not announced in the directory. EEB graduate seminars are often announced via the departmental listserver during the month before a semester starts so make sure you pay attention to your email. In your first semester, you should ask your advisor and lab mates about which courses to take. It is also a good idea to consult the department's course website to see what is offered during particular semesters, although this site often will not include all seminar courses. Some graduate courses are offered annually, but most are offered every other year. Independent study and reading classes are also available if you or someone else organizes them. Talk to your advisory committee and fellow students about a specific course offering if you are not sure if it is for you.

Orientation Course

All entering students are strongly encouraged to take the class **Preparing for a Career in Ecology and Evolutionary Biology (EEB 5100)**. This course is aimed at first year graduate students in all EEB degree programs and is offered every fall semester. It will introduce a wide range of topics related to success in graduate school and beyond. Different faculty members lead each week's session, so the course also serves as a way to meet much of the department's faculty.

Courses outside EEB

Many students take out-of-department classes, especially in statistics. Below is a list of some non-EEB courses that grads have taken and found to be useful. It is always best to find someone who has taken the course and get the real scoop.

Responsible Conduct of Research (GRAD 5910): All students supported by federally-funded grants or fellowships are required to complete a course in "responsible conduct of research". Currently, the University offers two ways to satisfy this requirement: 1) Complete GRAD 5910, a 1 credit course offered through the graduate school every semester; or 2) a combination of online training and in-person training through the graduate school. For more information, see http://research.uconn.edu/irb/responsible-conduct-of-research/.

Fundamentals of Teaching and Learning (EDCI 5830): For students interested in teaching, this course, organized by Keith Barker, is highly recommended: http://gcci.uconn.edu/edci-5830-001/. There is also a certificate program (Graduate Certificate in College Instruction) associated with the course: http://gcci.uconn.edu/

Natural Resource Applications of Geographic Information Systems or Remote Sensing Image Processing (NRE 5575): For students interested in GIS and remote sensing

technologies and their applications to ecological and environmental questions. Offered by NRE department. Additional GIS courses are also offered in the GEOG department.

Applied Statistics (STAT 5501): Offered by the Statistics department, focuses on exploratory data analysis: stem-and leaf plots, Box-plots, symmetry plots, quantile plots, transformations, discrete and continuous distributions, goodness of fit tests, parametric and non-parametric inference for one sample and two sample problems, robust estimation, Monte Carlo inference, bootstrapping.

Electron Microscopy (PNB 5347): This course provides necessary training for students wishing to use instruments in the electronic microscopy facility.

Projects in Electron Microscopy (PNB 5351): This course gives students an opportunity to conduct independent projects, using their own research materials, through the EM facility.

Seminars

Departmental Seminar: The weekly Departmental Seminar, which brings in outside speakers as well as members of our own faculty, is usually held on Thursdays from 4 to 5 pm. You should go to seminar every week (you are expected to be there and it is good to hear about work from other scientists working in the broad field of EEB). Pre-seminar snacks are typically held at 3:30 before the seminar in the Bamford Room. Most weeks, there's a graduate student/postdoc lunch with the seminar speaker, and interested students are also encouraged to sign up for individual meetings with the speaker, or to join them for other meals.

Teale Lecture Series: This is an interdisciplinary seminar series on Nature and the Environment that is open to the university community and the public and co-sponsored by EEB. Typically there are six lectures each academic year, held on Thursdays from 4 to 5 pm, at the Dodd Center, and followed by a reception. Teale lectures generally serve as the departmental seminar in the weeks that they occur.

Tuesday Evening Seminars: Usually held at a faculty member's house, these occur irregularly and are generally informal. Food and drink are provided. These seminars are a great venue in which to introduce yourself to the department by talking about your previous research—or to talk about a project before it is fully formed.

Graduate Student Symposium: Graduate students also have the opportunity to give research talks in a yearly symposium, currently held in the spring semester, and organized by the EEB graduate students. Everyone is encouraged to contribute; even in their first year (pre-UConn work can be presented, as can ideas for research projects that are still under development). Participating in this departmentally-sponsored symposium is a good way to practice before presenting at national meetings.

Financial Support

Students admitted to a research degree program (either MS or PhD) are usually admitted with an expectation of full financial support for the expected duration of their degree program (2 years from matriculation for MS students, 5 years for PhD students). All offers of financial support are conditional on satisfactory academic progress, satisfactory completion of assigned duties, and availability of funds.

Special circumstances: For students who switch from the MS program to the PhD program without completing a research-based MS degree, support will generally be extended to 5 years from initial matriculation into a UConn EEB graduate program. For students who complete an MS thesis and immediately enter the PhD program, support will generally be extended for 5 years beyond the initial 2 years of support for the MS. If more than two years of support were used while the student was in the MS program, the additional support will be counted against the PhD time.

Teaching assistantships (TAs): Students pursuing research-based MS and PhD degrees who lack other forms of support are offered graduate teaching assistantships. Students with a full-time academic year TA position are funded to work the equivalent of 20 hours/week for 9 months (August 23-May 22). There are three stipend levels, depending on the student's stage in their graduate program. These positions are covered by the contract between the University and the Graduate Employees Union and the payment levels are posted on the university's web site. See the Teaching Assignments section for additional information about TAships.

Research assistantships (RAs): Students may be supported on graduate research assistantships, which are usually grant-funded and offered by advisors to students in their own lab. Students with a full-time academic year RA position are funded to work the equivalent of 20 hours/week for 9 months (August 23-May 22). Again, there are three stipend levels, depending on the student's stage in their graduate program. These positions are covered by the contract between the University and the Graduate Employees Union and the payment levels are posted on the university's web site.

Outside fellowships: Students are strongly encouraged to apply for outside fellowships for which they are qualified. In addition to NSF Graduate Research Fellowships, in recent years, students have received support through the EPA STAR program, the Switzer Foundation and the Fulbright Foundation, among other programs. A few students have also supported themselves off grants that they wrote in collaboration with their advisors.

Tuition waivers: Students employed at 50% or more time (i.e., 10 hours/week) on a Teaching or Research Assistantship receive a full tuition waiver along with a partial waiver of fees. Students are responsible for paying the remaining fees. Many fellowships (e.g., NSF GRFP) pay the University a fixed amount in lieu of tuition.

Demi fellowships: The department receives a small budget for internal fellowships. These are generally awarded to senior students who are making excellent progress and have taught in the

majority of their semesters. They are also sometimes awarded to students who have compelling reasons to seek teaching release earlier in their graduate career (e.g., to support an extended field season). Usually, 3-5 fellowships are awarded each year. Students must be nominated by their advisor. A call for nominations is sent out by email late in the previous semester.

Dissertation fellowships: These \$2000 fellowships are awarded by the graduate school through a semi-annual competition and supplement other forms of support. Most PhD students who have advanced to candidacy are eligible and all eligible students are encouraged to apply. This fellowship may only be received once.

Outside employment: UConn offers TA positions and internal graduate fellowships on the expectation that students supported in this way will devote themselves full-time to their graduate program responsibilities. Thus, TAships and internal fellowships are offered with the understanding that students will not hold additional employment during the academic year. Exceptions will be considered on a case-by-case basis and must be approved in writing by both the major advisor and Department Head.

Financial aid: The pool of financial aid set aside for graduate students is quite limited. If you are a US citizen or permanent resident and submit the Federal FAFSA form by the deadline, you may be awarded financial aid, including in the form of a work-study position. If you apply, you should do so as early as possible, since the time of application affects your place in line if you are in the highest need category. If you receive a work-study award, talk to your advisor and the GAAC, as the department may be able to support you in a research position.

Summer support: During the spring semester, the GAAC generally requests information from all students about summer salary/stipend support. We generate a small amount of funding from diverse sources to provide summer support. This support comes from a mixture of fellowships and student labor positions, and is intended to cover basic living expenses. Students are also encouraged to talk to their advisors about opportunities for summer support and to pursue the additional sources of support below.

The GAAC awards money based on a combination of need and merit. Typically, money is first applied to subsistence awards, to ensure that all students have some minimal level of summer support. If funds remain, then additional awards may be based in part on merit (e.g., taking into account progress towards the degree, outstanding research accomplishments, and unusual service to the department or university).

The amount of summer support varies greatly across years and has been declining, so students should not plan to depend upon it.

Additional sources of summer support within the university include the following:

- Graduate Dissertation Fellowships (see above). These fellowships are awarded during the academic year, supplementing the TA/RA-ship. Students are therefore encouraged to save them to help cover summer expenses.
- Summer TA-ships in BIOL 1102 (the pay is unfortunately substantially less than for the same amount of work during the academic year).

- Instructorships for EEB's summer field courses (watch for an email in the fall soliciting interest in these positions).
- Other students have worked as tutors for athletes and at the Writing Center.
- Internal fellowships (NextGen, CCF, OSF) come with a guarantee of some summer support.

Departmental research awards: The department has a number of endowed funds that support graduate student research. There is an annual call for proposals in spring. Proposals are reviewed by a committee of faculty members. Successful proposals receive funding before the end of the spring semester. Priority is generally given to supporting research expenses, but these awards are also sometimes used to support participation in short courses and travel to professional meetings. These awards cannot be used to support graduate student salary or stipend. Awards generally range from a few hundred dollars to a thousand dollars (occasionally more), with the larger amounts available only for plant-related research (due to restrictions on how the different funds can be used). These funds are listed below; most honor former faculty members.

EEB Graduate Student Research Fund (all areas)
Henry N. Andrews Endowment (botany)
Ronald Bamford Endowment (botany)
George Clark, Jr. Endowment (ornithology)
Russell and Betty DeCoursey Endowment (entomology)
Alfred Hunyadi Forestry Fund (forestry)
Jerauld Manter Endowment (ornithology)
James A. Slater Endowment (entomology)
Francis R. Trainor Endowment (aquatic ecology)
Ralph M. Wetzel Endowment (vertebrate biology)
Walter R. Whitworth Endowment (fishes)

Center for Conservation and Biodiversity Research Awards: The Center for Conservation and Biodiversity has funds to aid graduate research and related educational opportunities in biodiversity and conservation biology. The Center makes awards for activities directly linked to student research and other educational experiences, e.g., travel to meetings and summer field sites, station fees, course and bench fees, visits to other institutions, internships (e.g., in EEB's collections and greenhouses), and supplies. It also makes a \$2000 award (the Silander award) for one proposal with a primary focus on botany, and especially plant ecology.

Travel awards: Upon advancement to candidacy, Ph.D. students become eligible for up to \$1000 in funding from the graduate school to support costs associated with presentations at professional meetings. These funds come from an account maintained by the graduate school; this may be exhausted before the end of the fiscal year (June 30), so students are encouraged to apply as early as possible. Before applying for a travel award, the university process to secure permission to travel must be completed (see Travel).

Teaching Assignments

Late in the fall semester and again in the summer, the department's GAAC emails a list of TA positions available in the upcoming semester and requests preferences from both TAs and those faculty members teaching courses. (You will likely not see this message before your first semester.) The GAAC makes teaching assignments, taking into account instructor preference, student preference, and other factors to the extent possible. Students are notified of their assignment by email, usually about a month before the semester begins. The department makes reasonable efforts to adhere to the timeline specified in the Graduate Employees Union contract, but note that assignments may change any time up until the semester begins, especially when doing so accommodates students who have received grant or fellowship support. The new contract between the Graduate Employees Union and the University mandates that all TAs receive a formal description of duties specific to their assignment; these vary by course. Instructors aim to provide these at least 30 days before the semester begins.

Most students teach laboratory sections for the introductory biology classes, BIOL 1102 (aimed at non-majors), BIOL 1108 (aimed at majors) and BIOL 1110 (focused on plants). In BIOL 1102 and 1110, students serve as co-TAs, with each section having 2 TAs. In BIOL 1108, each lab section has a single TA. Students who are interested in serving as a TA for an upper level class are encouraged to contact the course instructor(s) to discuss their interest, since instructor preference carries the greatest weight in determining upper level TA assignments.

TAs are responsible for getting in touch with the course instructor before the semester, being available for preparatory work the week before the semester begins, and being available to fulfill their TA responsibilities throughout the semester, including final exam week. Thus, students should plan summer field work or other travel in order to be back in Storrs with sufficient time before the semester begins. Students on 9-month TA appointments are paid over the winter break and therefore may be expected to assist in other teaching-related duties specific to one of their TA assignments in this period.

TA responsibilities and other professional opportunities may conflict (e.g., presenting research at a meeting, attending a workshop). In such cases, we encourage TAs to work with the course instructor and their fellow TAs to see if a brief absence can be accommodated. For unexpected absences (e.g., illness or family emergency), TAs should contact the person responsible for their course as soon as reasonably possible. Further details on managing absences from teaching duties are included in the contract between the University and the GEU.

Students who have special requests or unusual circumstances that affect their preferred teaching assignment should either note these in their preference submissions or send a separate email to the head of the GAAC. Examples of special requests that the department has sometimes been able to accommodate include designing schedules to allow for time-sensitive field work and concentrating a half-time TAship into half of the semester to make time for concentrated research assignments, especially those requiring extended time off campus, or for attending degree-related courses off-campus (e.g., through the Organization for Tropical Studies). If a student anticipates being on parental leave for a portion of any semester, they should also notify the GAAC at the time that teaching preferences are submitted.

Safety Training & Research Compliance

Employee Safety Orientation

Before beginning work in any new lab space, you should receive an employee safety orientation for the space. This will provide an overview of the hazards present in the work environment. The Employee Safety Orientation form must be signed by you and the supervisor of the space and returned to EHS within 5 days of beginning to work in a space.

Safety Training

Depending on your research area, you will likely need to complete some combination of biological and chemical safety training courses. UConn's Environmental Health and Safety Division offers the required safety training courses. This checklist will help you determine which courses are required. See the EHS website (ehs.uconn.edu) to find a list and schedule of courses. Some of the more common courses taken by members of this department are:

- Initial lab safety and chemical waste management
- Biosafety-general training
- Biological safety in [insert your study group here] research
- Shipping and transportation of biological agents

After an initial in-person training, many courses can be updated through online modules offered in HuskyCT. These will appear on HuskyCT after you register.

As a TA, you are also responsible for providing some components of safety training, and adhering to safe practices, in any lab or field courses that you teach.

Research and Teaching with Live Vertebrates (IACUC)

All research and teaching using live vertebrates must be conducted under the auspices of an approved IACUC (institutional animal care and use) protocol. For work that is purely observational, it may be possible to obtain a waiver (from the IACUC committee) of the IACUC requirement. Before conducting any research that involves handling live vertebrates, students must complete the university's IACUC training (see the UConn IACUC website for details). For your own research, check with your advisor to determine whether your lab already has an approved protocol. For new studies, be aware that IACUC protocols may require two or more rounds of revision before approval is obtained. It is recommended that students planning vertebrate research or who will be the instructor of record for a course that uses live vertebrates begin the protocol application process at least 6 months in advance.

Institutional Review Board (IRB)

All research involving human subjects must be conducted with the approval of the University's Institutional Review Board (IRB). This requirement includes surveys and questionnaires used in research. Before submitting an IRB protocol for review, a student and their advisor must complete the IRB's training program, which can be conducted on-line (see the UConn IRB web site). As with IACUC, the process for obtaining an approved IRB protocol can take multiple

rounds of revision and approval is subject the IRB's meeting schedule. Consequently, it is recommended that students planning to do any research that involves humans begin the protocol application process at least 6 months in advance.

Institutional Biosafety Committee (IBC)

All research that uses recombinant or synthetic DNA molecules, biological agents or toxins, must be registered with, reviewed by, and approved by the Institutional Biosafety Committee before it can be pursued. This requirement applies to even simple procedures, such as standard cloning into *E. coli*. Check with your advisor before undertaking any such work to see if it is already covered by the lab's IBC registration, or whether an amendment needs to be filed. See http://research.uconn.edu/ibc/ for more information.

Responsible Conduct of Research (RCR)

All students who are supported by NIH or NSF funds (whether as an RA or on a fellowship) are required to complete a course in responsible conduct of research. See the section on courses (above) for options.

Policies and Procedures

The University has developed a large number of policies relevant to life as a graduate student; see the student <u>policies webpage</u>. The <u>graduate catalog</u> contains additional policies related to academic matters. While these deal with unusual circumstances, they set some important constraints on how the department operates.

Leaves of Absence

Under compelling personal or medical reasons, a graduate student may request a leave of absence from his or her graduate program for a period of up to 12 months (one calendar year). Details on the conditions under which leaves will be granted and the procedures to be followed in requesting a leave are available in the <u>graduate catalog</u>. If you're able to, you are strongly encouraged to discuss your situation with your advisor. The Graduate School has a Graduate Student Advocacy Officer (currently Melanie Chenette) who has been an outstanding resource for some students.

Withdrawal & Dismissal

If at any time, a student's academic performance, progress in a graduate degree program, or professional development and/or suitability is judged by the advisory committee to be unsatisfactory to the degree that dismissal is warranted, the advisory committee must submit its written recommendation that the student be dismissed on such grounds. This decision may be appealed through the graduate school.

Other University Policies All Students Need to be Aware of

Policy Against Discrimination, Harassment and Inappropriate Romantic Relationships
Sexual Assault Response Policy
Violence in the Workplace Prevention

Useful Resources for Grad Students

EEB Graduate Student Association (GSA)

This organization provides a forum in which all graduate students in the EEB department are welcome to discuss any issues relevant to graduate school. The GSA typically has between two and three meetings a semester, but additional meetings can be called as necessary. The organization is run by a group of student officers. Meetings follow parliamentary procedure, as well as the guidelines specified by the organization's constitution and by-laws. Activities undertaken by the organization include an annual t-shirt design fundraiser, hosting an annual graduate research symposium, and the invitation of a speaker for a Departmental seminar.

All students in the department of Ecology and Evolutionary Biology working towards a PhD, MS, or BS/MS are eligible for GSA membership. Meetings are typically held in the Bamford Room after EEB Department Seminar at 5 pm on Thursdays. The EEB Graduate Student Association advisor is Chris Elphick.

Graduate Employee Union

Recently, UConn's graduate assistants voted to unionize. 2015-2016 will be the first year in which their employment as teaching or research assistants is covered by the contract negotiated by the graduate union and the administration. You can learn more about your rights and responsibilities as a union member here: www.uconngradunion.org/.

The Graduate School

The Graduate School, located on the second floor of the Whetten Graduate Center, is responsible for a myriad of paperwork: graduate registration; graduate fellowships; approving your plan of study and dissertation prospectus; dissertations; and information about internal and external sources of funding.

Fellowship Advisor

The Graduate School employs a fellowship advisor who specializes in graduate fellowships in the STEM fields, Rowena Grainger. In addition to offering informational sessions that provide an overview of national STEM fellowships, the STEM fellowship advisor is available for individual consultations to provide feedback on application materials. This resource is an excellent supplement to the support offered within the department.

Bamford Room (room TLS 171B)

This room houses a complete collection of dissertations from the Department, as well as many of the books published by the faculty. This room is also frequently used for group meetings and (informal) seminars. Ask Kathy Tebo if you want to reserve the room for a meeting.

Bioinformatics Facility

Provides computational power and technical support. The computer cluster maintained by the facility offers a wide range of software useful for genomic and phylogenetic investigations. At present, the use of these computers is free. Staff provide training and consultation in the use of

bioinformatics tools at no charge to UConn graduate students and faculty, but prospective users must schedule an appointment prior to a formal consulting session. For high-throughput (Next-Gen) genomic applications, the Center for Genomic Innovation (<u>CGI</u>) and the <u>MARS facility</u> may be invaluable resources.

Biological Collections

An extensive collection of vertebrate, invertebrate, and plant specimens from around the globe are available for graduate student and faculty research purposes. Students must pass EEB 5894 Introduction to Natural History Collections, which is offered annually, prior to use of collection facilities.

Collections Library

This library holds botanical, vertebrate, invertebrate and other biological resources. Some journals that are not found at the library may be found here. Located in the BPB, room 112. Grad students must pass EEB 5894 Introduction to Natural History Collections prior to using the Collections Library.

Greenhouses

Collection greenhouses contain the department's live plant collection. They are located behind TLS and are open to the public from 8:00 until 4:00, M-F. Research greenhouses are located on the 6th floor of the BioPhysics building (BPB), connected to TLS but access is limited to those performing research in this facility. If you would like to use this space for your research, talk with Clint Morse.

Electron Microscopy Facility

The Bioscience Electron Microscopy Laboratory is located in BioPhysics Building (BPB) G06.

Scientific Illustrator

Biology Central Services employs a scientific illustrator, Virge Kask, whose assistance is available for a fee. Many students use her poster printing service for conference posters. Virge has also supervised students pursuing independent study projects in scientific illustration.

Software and computing

UConn makes a large amount of software available to students for free or at substantially reduced cost. Free software can largely be accessed via the university's virtual computer lab, Skybox. Note that software that is not listed on the home page might be available after you log in (e.g., certain GIS packages). For additional information on software available to UConn students, visit http://software.uconn.edu/.

Students also have access to 10GB of free cloud storage, via the P:\ drive; see http://fileserver.uconn.edu/students/. For more on computer support, contact HuskyTech.

Other Information

Office space

All graduate students receive office space in the department. For students in labs housed in BioPharm (PBB), office space is generally attached to the labs. The arrangements in Torrey (TLS) vary; your advisor will know what space you're assigned to.

Building and room keys

For keys to TLS and rooms within TLS, including the EEB office, see Ken Bernier in the Biology stockroom. Your advisor will need to first send Ken an email telling him which rooms you will need access to. After hours access to the BioPharm building requires a key card. See Skip Copeland, the building manager, to request a key card (or ask him to code your student ID card so that it will give you access). Access to most rooms in PBB requires a code, which you enter into a keypad. Your advisor can give you codes for your lab space and tell you who to contact for any other rooms you need to use.

Student ID card

You can obtain your student ID in the Wilbur Cross Building. You will need to register and pay your fees, or get a fee deferral, before you can get your card. The bursar's office, which is in the same area of Wilbur Cross, handles registration/fees. For more information on ID cards, including what to do if you lose yours, see www.onecard.uconn.edu.

If you work in BioPharm, then you can get an ID card that will be keyed to the building doors (instead of needing a separate keycard). To set this up, talk to the PBB building manager.

NetID

UConn will use this ID to identify you for obtaining access for certain computing services such as: Student Administration, HuskyCT, VPN and Skybox. It is your initials (3 letters) the year you started in the program (2 digits) and how many people share that info with you when you started (3 digits) For example: if you are the only person with initials X.Y.Z. that started in 2014 your NetID would be: xyz14001. More information can be found here: https://netid.uconn.edu/.

<u>Student Administration System</u> (also called "Peoplesoft")

This system is used for many official interactions with the university. You can use it to search the course catalog and enroll for classes, and to view your class schedule, advisor information, grades, unofficial transcript, charges and payments, and financial aid information. The system is also used by Student Health Services. Additionally, you can change your personal information.

HuskyCT (Blackboard platform)

Most undergraduate courses, and some graduate courses, are administered through HuskyCT. You will likely have access to HuskyCT for any course you TA. To become familiar with its abilities, consult your fellow TAs or the <u>online help pages</u>. If you are stuck, calling the <u>Instructional Resource Center</u> (6-5052) can often get you unstuck. HuskyCT is also used for some safety trainings and as a way to meet other compliance requirements.

Email address

Most email addresses take the form firstname.lastname@uconn.edu. If this is not unique, then your email address will also include your middle initial. UConn uses this address for all official communication, so it is important to start monitoring this account even before your arrival.

Departmental mailing lists

The department maintains a department email list-serve (eeb-dept@darwin.eeb.uconn.edu) as well as sublists for graduate students (eeb-grads@...), faculty (eeb-faculty@...), staff (eeb-staff@...) and postdocs (eeb-postdoc@...). Shortly before you matriculate, the department will subscribe you to this list, and you should read mail sent to this address regularly. Please send any messages to the list from your UConn email. This ensures that your message is distributed without delay, since posting is restricted to list members.

Mail

Mail boxes for all EEB faculty members, staff, postdocs, and graduate students are located in the EEB departmental office on the third floor of TLS (room 314).

Faxing

The departmental fax machine is in the EEB office. The fax number is 860-486-6364. It is primarily intended for business use, but the department tolerates occasional personal use. All faxes are logged in a book beside the machine; for personal faxes, you will eventually receive a note from the department telling you how much you owe for any long distance charges (which are very low for faxes sent within the US).

Phone calls

All labs have phones which can be used for work-related calls. To dial an on-campus number, dial the last 5 digits (e.g., 6-0000). Press 8 to dial off campus (e.g., 8-860-000-0000).

Room reservations

The department has several rooms that can be reserved for small group meetings (e.g., seminar classes, lab meetings, or committee meetings): the Bamford room (TLS 171B), the collections library in the Biology/Physics building (BPB 112), and the PharmBio building "fish bowls" (PBB 201 and 301). Room reservations can be made with Kathy Tebo in the EEB departmental office.

Projectors

EEB has a number of projectors available. You can reserve these in the third floor EEB office (TLS 314), where you can book the projectors based on their "color" in a special binder. Ask the student working in the office if you need help.

Office Supplies

For office supplies for teaching-related needs, as well as for paper and toner for the printers in labs, see the EEB office assistants, Kathy Tebo, or Pat Anderson.

How to Do Things

How to register and pay your bill

To qualify as full-time, students on RA/TAships must register for a minimum of 6 credits and students on full fellowships need to register for at least 9 credits. You should first talk to your advisor and other students to find out what courses you should take (see also the Finding out about courses section). There is a list of classes available online through the Registrar's office website. The <u>Student Administration System</u> is your gateway to registering for classes. To get in this system you will need your student ID number and password (see above).

Registering for classes allows the bursar's office to generate a bill for you. If you register early enough before the semester starts you may get a bill in the mail. Whether you are mailed a bill or not, you need to pay your fees by the tenth day of classes. You can also get your bill by walking into the Bursar's office in the Wilbur Cross Building and asking for it. You can pay at the Bursar's office or have this fee deferred via payroll deduction. The Bursar's office can explain details about deferments and there is an online form on their web site.

Important dates relating to registration, as well as the start/end of the semester, holidays, etc. can be found at the Office of the Registrar's <u>Academic Calendar</u>.

If you need help, there is considerable information on the web site of the Office of the Registrar. If you cannot find what you need to know, ask someone for help. Either talking to another grad student or a call to the registrar's office (6-3331) can save a lot of aggravation and frustration.

How to purchase research supplies

The system for ordering supplies is complex. Basic information is included below, but the system frequently changes so ask for help if you run into a problem. Before buying anything, it is important to determine whether an expense is allowable, whether the university has a specific vendor who you have to buy from, and what documentation is required prior to purchase. This may differ depending on the source of funding and type of purchase.

- Kuali Financial System System (KFS): All university-administered accounts are assigned a Kuali number, with which purchases can be made. A KFS number can be used to buy supplies from the biology stockroom and Biotechnology Center. While orders may be placed directly within the Kuali system, this should only be done by trained users. If you wish to make purchases from an on-campus supplier using funds that are not in a KFS account (e.g., because many graduate student grants are paid directly to the student), talk to Pat Anderson in the EEB office about whether you can use a departmental number and then reimburse the department by cash or check.
- **BCS stockroom:** Certain items are kept on-hand in the BCS stockroom in TLS 175, managed by Ken Bernier. Stocked items include basic chemicals, pipet tips, nitrile gloves, microcentrifuge tubes, and paper towels.
- **Biotechnology Center:** This center maintains freezer programs with major biotechnology companies. Some supplies are available for pick-up, while others can be

- special-ordered. The center passes along all discounts it receives, including free shipping, but it also adds a 7% cost recovery fee.
- **EEB department credit card:** Some purchases (current limit: \$4999) that are being paid for with a KFS number can be made on the departmental credit card. Kathy Tebo handles these purchases. To have her make a purchase, you will need to provide detailed ordering information, including the web address at which you found the item and the KFS number. Items purchased in this way are delivered to the EEB department office. If you receive a large package, you will usually be notified by email, but otherwise, you should watch your mailbox for the shipment's arrival.
- Reimbursement: There are strict rules for what may be reimbursed and rules change
 regularly. Be sure to consult with Kathy Tebo or Pat Anderson before buying anything
 that you expect to be reimbursed for, in order to ensure that you follow the rules
 correctly. Also, make sure that you keep all documentation (receipts, etc.) associated
 with each purchase.
- Deliveries: After you receive a delivery, it is essential that you sign, date and turn in the invoice/packing slip otherwise the vendor does not get paid. If the item was purchased on the departmental credit card the packing slip must go to Kathy Tebo in the EEB office. For items purchased through Kuali or with a purchase order, the packing slip goes to Ken Bernier in the Biology stockroom. It is a good idea to keep a copy (electronic or paper).

Hiring Personnel

Field and lab assistants can be hired on university research funds. There are lower overhead expenses for student workers who are hired through student labor; however, these students must be enrolled at the time of employment. Hiring assistants on grants that are awarded directly to students (rather than going through the Office of Sponsored Programs) is more complicated because they must be cannot be hired as university employees. If you are in this situation, seek advice from your advisor or others in the department.

Personnel hired on grants must be given an Employee Safety Orientation (http://www.ehs.uconn.edu/forms/ESO.pdf) and are required to meet all compliance training requirements (e.g., lab safety, IACUC). Volunteers also should receive all appropriate training. If you have volunteers working for you, it is advisable to develop a formal volunteer agreement (see Lois Limberger for details).

Parking

There is student parking relatively close to the biology buildings. You must obtain a parking permit (after paying fees or receiving a fee deferral) from parking services. The cost of the permit will depend on the lot(s) you wish to park in. For more information, see the Parking and Transportation Services web site: http://park.uconn.edu/. Most students select one of these options:

- GA/TA Parking A paid graduate assistant parking sticker allows you to park in most student lots. Lots often used by EEB grads (roughly in order of proximity) are X Lot, F lot, T lot, L lot, and W lot.
- Area 3 Parking Grad assistants can also obtain a sticker to park for free in restricted sections of some of the lots farther from campus. The Area 3 parking in F lot is reasonably close but fills up at an early hour; Area 3 parking is usually available in W lot. You can park almost anywhere on campus after 5:00 p.m. Parking along North Eagleville Rd. is allowed only from 6:00 a.m. to 6:00 p.m. Saturday and Sunday.

Travel

Travel regulations change frequently and in some cases requires advance approval; consult the latest policies at http://travel.uconn.edu prior to any university-related travel.

- The <u>travel webform</u> should be filled out in advance for all university-related travel, whether domestic or international. This applies whether or not university funds are being used. Additional approval is required if you are requesting a travel advance.
- International travel requires additional registration and approval prior to departure. This
 is handled through the Office of Global Affairs (education abroad section). Currently,
 information is available on their <u>website</u> and in a university <u>student international travel</u>
 policy document.
- The University provides health insurance for all UConn-related international travel (at no cost to you). At present, you are automatically signed up for this insurance when you receive approval to travel internationally. If you do not receive notification prior to travel, check that the message did not get sent to your spam box.

Travel Reimbursements:

- Reimbursement of travel expenses is processed in Biology Central Services (BCS).
 Note that many expenses require original receipts, so save all paperwork. You may find this checklist helpful in preparing your reimbursement request.
- BCS staff will fill out the travel reimbursement form and have you sign it.

Directory of EEB and BCS Staff

We are lucky to have a knowledgeable and dedicated staff, both in EEB and in BCS. Figuring out where to go for what—or what procedures need to be followed--is not always easy; here are some suggestions for where to start:

EEB staff

Kathy Tebo (EEB Administrative Assistant)

Office: TLS 312; Phone: (860) 486-4319; E-mail: kathleen.tebo@uconn.edu

General questions about how to do things in the department.

Pat Anderson (EEB Business Services Supervisor)

Office: TLS 312A; Phone: (860) 486-4323; E-mail: pat.anderson@uconn.edu

Questions about graduate student grant funding when funds are held by a departmental

account; official travel.

BCS staff

Anne St. Onge (BCS Graduate Coordinator)

Office: TLS 161; Phone: (860) 486-4314; E-mail: anne.st onge@uconn.edu

Questions about almost everything related to the Graduate School. If Anne doesn't know the answer, she knows who does! Anne also handles the paperwork for TA/RA offer letters.

Lois Limberger (BCS Employment and Payroll)

Office: TLS 161; Phone: (860) 486-4315; E-mail: lois.limberger@uconn.edu

Questions related to visas, summer payroll, and student labor if you hire anyone on your

research funds.

Ken Bernier (BCS Stockroom Manager)

Office: TLS 175; Phone: (860) 486-2296; E-mail: kenneth.bernier@uconn.edu

See Ken for building keys and to buy basic lab supplies

Nick McIntosh (BCS IT support for university-owned computers)

Office: TLS 155; Phone: (860) 486-0308; E-mail: bcscomputers@uconn.edu

Jim Reiman (TLS building manager)

Office: TLS G055; Phone: (860) 486-5520; Cell: (860) 208-1023; Email:

James.Reiman@uconn.edu

Questions related to building and facilities-related issues in TLS: from floods to light bulb

replacements.

Skip Copeland (PBB building manager)

Office: BioPharm 101A; Phone: (860) 486-5264; Cell: (860) 455-5136; Email:

francis.copeland@uconn.edu

Questions related to building and facilities-related issues in PBB. Skip can also program your

student ID to allow access to the building after hours.

EEB collections staff

See the appropriate manager for your favorite study organism.

<u>Clint Morse</u> (EEB Greenhouse, Plant Growth Facilities Manager)

Office: BPB 603; Phone: (860) 486-8941; E-mail: clinton.morse@uconn.edu

Bob Capers (Plant Collections Manager)

Office: BPB 125; Phone: 860-486-1889; E-mail: robert.capers@uconn.edu

<u>Sue Hochgraf</u> (Vertebrate Collections Manager)

Office: BPB 127; Phone: (860) 486-8945; E-mail: susan.hochgraf@uconn.edu

Jane O'Donnell (Invertebrate Collections Manager)

Office: BPB 126; Phone: (860) 486-4451; E-mail: jane.odonnell@uconn.edu

Where to go when you need help

Immediate Threats to Life or Health

Dial 911 (8-911 from an on-campus phone)

Other Emergencies

Non-life threatening lab emergency, including some chemical spills

Call Environmental health and safety at 860-486-3613.

Building emergencies (e.g., floods, power outages)

- TLS building manager: Jim Reiman (cell 860-486-5520)
- BioPharm building manager: Skip Copeland (cell 860-486-5264)
- Both Jim and Skip can help with either building in an emergency
- After hours: call facilities at 860-486-3113 and follow up with an email to the building manager.

Mental health (for yourself or someone else)

Immediate help is available via these resources at Counseling and Mental Health Services

General resources

Ombuds Office

If you are not sure where to turn after reading this list, the Ombuds Office may be a good starting point: "The UConn Ombudsman serves as a neutral resource who provides confidential and informal assistance to members of the campus community. The Ombuds Office was established to provide a confidential, neutral resource for staff, faculty, and graduate students to express concerns, identify options to address workplace conflicts, facilitate productive communication, and surface responsible concerns regarding university policies and practices."

Graduate Advocacy Office

Another good starting point if you are unsure where to turn is the Graduate Advocacy Office. The primary function of the Graduate Advocacy Officer is to assist graduate students and postdoctoral scholars in navigating the university environment. This position is currently held by Melanie Chenette (melanie.chenette@uconn.edu). The Office's website also has suggestions for where to start to address many problems.

Specific resources

Financial stress

• The <u>GSS graduate student emergency loan fund</u>, administered by the Graduate Student Senate, provides short term loans for financial emergencies

Mental health (your own or that of someone you're concerned about):

- For immediate help, Call UConn's Counseling Services at 860-486-4705 and ask to speak to the "On-Call Therapist"
- UConn Counseling & Mental Health Services: http://counseling.uconn.edu/

• 1-800-GRAD-HLP (National Grad. Crisis Help Line)

Addiction issues

UConn Alcohol and Other Drug Education Office: http://aod.uconn.edu/

Disability accommodation

• The Center for Students with Disabilities works with students to ensure that they receive appropriate educational accommodations: http://csd.uconn.edu/

Visa questions

- Lois Limberger (lois.limberger@uconn.edu) in BCS
- International Student and Scholar Services: http://isss.uconn.edu/

Problems with your advisor

• If problems arise between you and your advisor, we recommend talking informally with your other committee members or another faculty member you are comfortable with. If the situation persists, then contact the Department Head.

Problems related to employment or working conditions as a TA/RA

• The procedure for resolving employment-related problems is established by the Graduate Student Union contract. The first steps are to try to address any problems informally by talking directly to your supervisor. If that does not produce a satisfactory resolution, you should submit a written report to the Department Head, with whom you may also wish to consult informally. The Graduate Employee Union can advise you on additional steps in the process, should they become necessary.

Discrimination or harassment

- The Office of Diversity and Equity (ODE) investigates complaints related to discrimination and harassment. This is the place to report any violations that you experience: http://www.ode.uconn.edu/
- Note that <u>any individual who is notified of sexual assault or harassment while</u>
 <u>acting in a supervisory capacity is required to report this information to ODE</u> (this
 includes TAs or RAs in a lab, or anyone who works directly with undergraduate
 research students).