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1. Introduction

This handbook provides an overview and practical details of requirements for the M.S. and Ph.D. degrees in the Department of Biological Sciences (DBS). There are currently two graduate programs that exist within the department, the Integrative Biology and Marine Biology programs. While each program has specific curricular requirements, there remains much overlap between the two programs. Thus, this will serve as a general guide for being a graduate student in DBS with notes for each program as needed. Both programs, like all other graduate programs at UNH, are part of the UNH Graduate School; additional details, links, and resources for graduate students are available at the UNH Graduate School website (gradschool.unh.edu/).

The current version of this handbook is available online at the program’s website (https://colsa.unh.edu/biological-sciences/key-documents).

Comments, corrections, and suggestions for additions and updates are welcome at any time, and should be addressed to the Associate Chair.

2. Program Overview

This chapter offers a (relatively) quick summary of program structures and requirements. Later sections include more details (e.g. rules for committees, format for thesis proposals and defenses, information on particular courses, policies and issues).

Both graduate programs are administered through the Department of Biological Sciences (https://colsa.unh.edu/dbs), and includes faculty from other COLSA departments (colsa.unh.edu/about) as well as the School of Marine Sciences and Ocean Engineering (marine.unh.edu).

Degrees and options

DBS offers M.S. and Ph.D. degrees in (1) Integrative Biology (IB), and (2) Marine Biology (MB).

Choice and role of faculty advisor

Every incoming graduate student is formally sponsored by one, or sometimes jointly by two, member(s) of the faculty. Sponsorship is decided at the time the offer of admission is made, based on the student’s interests and on prior discussion between the applicant and individual faculty members. The purpose of immediate sponsorship is to ensure that every student has a faculty mentor from the start. The expectation is that the student will do research under the supervision of his/her initial sponsor, and this is usually the case. However, entering students who do not yet have a clearly-defined research interest are not obliged to work in the area of their initial advisor. A change of advisor does occasionally occur when a student discovers that his/her interests lie in an area best served by some other faculty member. The aim of the
program is to provide each student with the best guidance available, and occasional changes of advisor are a part of this process.

Summary of shared requirements

M.S. Degree:
- 30 credit hours total, with 10 maximum being research credit
- Thesis proposal, OKed by thesis committee
- Public presentation and thesis defense with committee

See APPENDIX 1 for M.S. degree timeline and checklist.

Ph.D. Degree:
- Variable credit hours dependent on program, and guidance committee recommendations
- Thesis proposal, OKed by thesis committee
- Written and oral comprehensive exams
- Public presentation and dissertation defense with committee

See APPENDIX 2 for Ph.D. degree timeline and checklist.

3. Program Requirements and Timeline

Overview

The M.S. degree should normally be completed in two years. The University requires that all graduate work for any master's degree must be completed within six years from the date of enrollment in the program.

The Ph.D. degree should normally be completed within five years (three years for students entering with a master's degree). All graduate work for the Ph.D. must be completed within eight years of enrollment, or within seven years if the student entered with a master's degree in the same field. Per University policy, the student must be advanced to candidacy within five years after enrollment or within four years if the student entered with a master's in the same field. In DBS, we encourage students to advance to candidacy in the second or third year. Students and research projects do not all progress at the same pace. The timelines are offered as a guide, but departure from them is permissible when circumstances warrant. There are, however, some firm Graduate School deadlines that must be adhered to: see https://gradschool.unh.edu/academics/graduate-school-academic-calendar for details.

Committee Information

It is recommended that M.S. candidates assemble a Master's Thesis Committee by the end of their first semester, and submit the Master’s Supervisory Committee Nomination Form to the
Graduate School (https://gradschool.unh.edu/academics/forms-policies). The Master’s Thesis Committee comprises the thesis advisor plus two or more additional faculty.

Ph.D. students require two sequential and formally distinct faculty committees as specified by the Graduate School, such that the initial Doctoral Guidance Committee is replaced upon advancement to candidacy by the Dissertation Committee. The thesis advisor is a member of both committees; other Guidance Committee members usually continue on as Dissertation Committee members, though this is not required.

Each Ph.D. student sets up a Doctoral Guidance Committee (typically four faculty in addition to the advisor) as soon as possible – no later than the end of the second semester – and submits a Doctoral Guidance Committee Nomination Form to the Graduate School (https://gradschool.unh.edu/academics/forms-policies). The Guidance Committee provides course recommendations, assists with proposal development, assesses the initial research proposal, and ultimately supervises and assesses the candidacy exam. The Guidance Committee also provides ongoing feedback about the research concept, and monitors research progress.

Upon advancement to candidacy, the Doctoral Dissertation Committee is officially declared, and the Dissertation Committee Nomination Form is submitted to the Graduate School (https://gradschool.unh.edu/academics/forms-policies). While the formal establishment of the Dissertation Committee occurs at this stage, the committee is normally already in place and has been functioning for some time. Most commonly, a single committee performs the functions of both the Guidance and the Dissertation Committees, with the exception that outside members (required for the Dissertation Committee) are typically added along the way rather than at the very start.

With continuity provided by the thesis advisor and other members continuing from the Guidance Committee, the Dissertation Committee supervises the dissertation, administers the final examination (thesis defense), and determines that the work merits the award of the Ph.D. degree. The Dissertation Committee has at least five members: three from within and two from outside the Graduate Program. The committee may be larger if desired. The Graduate School requires that at least two members of the Dissertation Committee be from outside the program; they may be from related departments/programs at UNH, or from other institutions. Students are strongly encouraged to consider recruiting committee members from beyond UNH, to broaden their professional networks.

Any faculty member in IB or MB can serve as the primary or co-advisor for a student in the program. Individuals who are not members of the program faculty can serve on M.S. and Ph.D. committees (though not as primary advisors) for students in the program. Faculty members who are interested in joining a specific graduate program are encouraged to contact the program coordinators.
In addition to regular members of the Graduate Faculty, the following may serve on graduate committees with the recommendation and approval of the graduate program and the Graduate Dean: Tenure and tenure-track faculty from departments that do not offer graduate degrees; Research faculty; Clinical faculty; Extension faculty; Faculty emeriti; Lecturers; Adjunct faculty; Affiliate faculty; Individuals with no formal appointment at UNH.

The student, advisor, and committee should work together to ensure that all committee members are kept informed of progress and important dates and deadlines (e.g. when the student intends to defend the M.S. thesis, schedule qualifying exams, or defend the doctoral dissertation).

M.S. students should meet with their committee once per semester; the timing is more flexible for Ph.D. students, but there should be at least one committee meeting per year. Ideally committees meet in person, but where this is not possible, electronic participation by some members is acceptable. Scheduling committee meetings is the responsibility of the student.

Adding and subtracting committee members.

Students are able to add and subtract committee members over the course of their graduate journey. All changes should be discussed between the student and the advisor. The program coordinator should then be notified. If you are a Ph.D. student, the UNH Graduate School would also like you to fill out a Doctoral Committee Revision Form and submit to the graduate school.

Coursework and Degree Requirements

Each major has its own set of requirements for graduate students. Please refer to those requirements listed in the below appendices:

Appendix 3 – IB course requirements
Appendix 4 – MB course requirements

What follows here are general requirements that are common among both programs.

Credit requirements

The M.S. degree requires completion of a minimum of 30 credits, 6-10 of which are earned for thesis research (BIOL 899 Master's Thesis).
There is no specific credit requirement for the Ph.D., though students must meet curriculum requirements.

Up to 8 graduate credits from another institution may be transferred, provided the credits were not counted toward another degree, and the course grade was a B or higher. Petitions requesting transfer credit must be supported by the advisor and graduate committee, and approved by the UNH Graduate School.

Students admitted via the Accelerated Master’s (AM) process may apply up to 12 credits of prior upper-level UNH coursework in accordance with AM policies.

The level of the courses taken to meet registration requirements is not specified. However, taking non-graduate classes does not move one towards degree completion, so taking undergraduate classes is not a common practice. A grad student cannot petition to take a 500-level course, however 500-level courses can be audited by graduate students with the cost of the course at the expense of the graduate student.

Students should discuss with their advisor and committee which courses will be most useful, and what course load makes sense in light of specific research and assistantship obligations (for example, an intense field season).

How many credits to take, and financial implications:

Graduate students are normally required to maintain continuous enrollment each Fall and Spring semester by registering for courses, research (Grad 900/BIOL 999), or continuing enrollment (Grad 800) (see below for distinctions). Students who don’t register for the Fall and Spring semesters will have their degree status discontinued.

Graduate students registered for 9 or more credits, Master’s Continuing Research (Grad 900), or Doctoral Research (999) are classified as full-time students. Students holding assistantship appointments are also considered full time and must register for a minimum of 6 credits, Master’s Continuing Research (Grad 900), or Doctoral Research (999) each semester. Students registered for Continuing Enrollment (GRAD 800) are not eligible to hold an appointment. For details, please see the Graduate School website (https://catalog.unh.edu/graduate/course-descriptions/grad).

Students on assistantships (TA or RA) pay reduced mandatory fees (fee information: https://www.unh.edu/business-services/tuitgrad); this benefit applies no matter how many credits you’re taking. Tuition is commonly waived or covered for students on TA or RA appointments; however, mandatory fees remain the responsibility of the student. Students on assistantship in the spring semester can have tuition waived for summer courses offered by the Graduate School (GRAD prefix).
Students enrolled for more than 16 credits pay additional tuition based on the number of additional credits (https://www.unh.edu/business-services/tuitgrad).

Doctoral students who have advanced to candidacy may petition each semester to waive fees if they meet the specified conditions (https://catalog.unh.edu/graduate/general-information/fees-financial-support/).

Tuition and fee information from UNH Business Services is available at https://www.unh.edu/business-services/tuitgrad; Graduate School information about fees and financial support is at https://catalog.unh.edu/graduate/general-information/fees-financial-support/.

Which courses count:

**Graduate courses are numbered 800- or 900-level.** Course descriptions can be found in the online Graduate Course Catalog (https://catalog.unh.edu/graduate/). If there is a graded option, graduate courses may not be taken Pass/Fail.

**Graduate credit for 700-level courses:** 700-level courses are advanced undergraduate courses. In rare cases graduate degree students may petition to earn graduate credit for up to 12 credits in 700-level courses, provided the credits are taken in a program other than the one in which the student is seeking the degree and provided such courses are approved by the student's adviser, graduate program coordinator, and the dean of the Graduate School. Such courses must be taken for a letter grade. Petitions must include what additional requirements or expectations will be required of the student to make the course a graduate level experience. **Petition requests must be made prior to enrolling in the course and are not guaranteed.** Petition forms are available at https://gradschool.unh.edu/academics/forms-policies.

**Undergraduate courses below 700-level:** While taking non-graduate classes is generally discouraged, in some cases, graduate students may need background or training that can best be obtained by taking an upper-level undergraduate class, if no equivalent course is offered at the graduate level. Undergraduate level courses taken by graduate students are billed at the graduate rate, must be taken for a letter grade, and are subject to the Graduate School’s failing grade policy. Courses taken below the 700-level cannot count as graduate credit.

**Audits:** Graduate students may audit courses with the approval of their advisor and the instructor. Credits for an audited course in which a graduate student is formally enrolled may be counted toward enrollment requirements for appointments and assistantships. (Note that tuition for audited courses is the same as for credit courses.)

**Graduate credit from another institution:** Students can request to transfer up to 8 credits of graduate credit from another school, provided the credits were not counted toward another degree, and the grade was at least a B. The transfer request form is available at (https://gradschool.unh.edu/academics/forms-policies).
Where to find enrollment policy, course and registration information:

- Graduate School enrollment policies and petition forms: https://gradschool.unh.edu/academics/forms-policies
- the UNH Course Search Form searches all courses (grad and undergrad) (https://courses.unh.edu/)
- descriptions of graduate courses are in the online catalog https://catalog.unh.edu/graduate/
- registration information and deadlines are posted at the Graduate School website https://gradschool.unh.edu/graduate-student-resources

Petitioning a course to count as a requirement

Occasionally students may want to petition a course to count as a degree requirement. Speak with the graduate program coordinator to determine if this would be acceptable and for more information for the correct form to file to formally make a petition.

Change of degree status, M.S. to Ph.D. enrollment

M.S. graduates normally go elsewhere for further study or for employment after completing their thesis. However, students enrolled for an M.S. degree may petition the Graduate School to continue for the Ph.D. after receipt of the M.S. or, rarely, to convert to Ph.D. enrollment without first completing the M.S. If a student wishes to convert from M.S. to Ph.D., the advisor will convene a meeting of the DBS GPC and the student's Master’s Thesis Committee to consider the application. If the application has departmental support, a "change of degree" form is then completed and submitted for Graduate School approval (https://gradschool.unh.edu/academics/forms-policies).

Admission to Ph.D. enrollment should not be considered automatic on completion of the M.S., and conversion from M.S. directly to Ph.D. enrollment is done only in extraordinary circumstances. Conversion, when appropriate, should occur no later than the beginning of the third semester of enrollment.

Students who change to a Ph.D. program (and have not already done so) are required to attend the Responsible Conduct of Research Training. Further information is available at https://www.unh.edu/research/rcr-training-unh.

Research proposal

M.S. students must have their proposal approved by their advisor and Thesis Committee by the end of the second semester.

Ph.D. students present and defend their formal research proposal to their Guidance Committee in order to be advanced to candidacy, normally in the second or third year. However, a solid
draft of the proposal should be shared with the committee by the end of the second semester, and presented in seminar form at least to the committee, and preferably for a wider (public) audience.

Please contact individual Program Coordinators to find guidance in terms of proposal length and format.

**Ph.D. qualifying exam and advancement to candidacy**

Following approval of the research proposal by their committee, students who wish to be admitted to doctoral candidacy must pass a formal qualifying examination that assesses both broad basic knowledge of the student’s field, and topics central to the project. The student is responsible for scheduling both parts of the exam; plan well ahead to account for committee members’ travel plans, sabbaticals, etc. The written portion of the qualifying exam should be taken no later than the end of the fifth semester, though it may be delayed beyond that point if necessary.\(^1\) The oral portion of the exam follows successful completion of the written part, usually within a few weeks.

Student’s should contact their respective degree programs to be provided specific details regarding the procedure of both the written and oral comprehensive exam.

When the student has passed both parts of the qualifying exam, the advisor will inform the Graduate School and recommend that the student be advanced to candidacy in the Ph.D. degree program by submitting the appropriate form (https://gradschool.unh.edu/academics/forms-policies). At this point, the student’s Doctoral Dissertation Committee will be nominated using the Graduate School form (https://gradschool.unh.edu/academics/forms-policies).

**Seminar presentations**

Graduate students, both M.S. and Ph.D., are required to present their research results as part of their thesis or dissertation defense in their final year. The defense presentation is required to be announced publicly, with their advisor and committee present (distant committee members may participate virtually if necessary).

Giving departmental seminars is encouraged and participation in the UNH Graduate Research Conference is strongly recommended. Students should also seek opportunities to present their work at professional meetings. Presentations to public/stakeholder/non-academic audiences are important professional contributions as well as a way for students build their communication skills.

\(^1\) The outer limit set by the Graduate School is five years.
Annual progress report and review meeting

Each student will meet with a representative of the Graduate Program Committee in the spring semester to review progress and identify any concerns. The purpose of this meeting is to:

1) Encourage the student to think critically about his/her own progress (or lack thereof) and goals for both the immediate and long-term future.

2) Increase a sense of accountability on behalf of graduate students, and motivate students moving at a slow pace to increase their productivity and involvement in the program.

3) Remind students that to be a truly successful graduate student, one should (ideally) demonstrate success in multiple areas (research, funding, teaching, service), and provide examples for how to do that.

4) Provide a clear paper trail in case situations arise in which there is confusion or disagreement about a student's progress.

The annual meeting also provides an opportunity for students to raise any concerns, and provide feedback about the program and their graduate experience.

In preparation for progress review meetings,
- The student writes a report about their progress, and submits it to their advisor and committee for review and comments. This should occur in the first half of the spring semester. Instructions and template for the student report are available at the program website, or from the department.
- The advisor reviews and signs the student’s report, and then also fills out an evaluation describing his/her view of the student’s progress, and including a summary of the most recent committee meeting – which should take place earlier in the same semester. Instructions and template for the advisor report are available at the program website, or from the department. Reports must be submitted at least one week before scheduled meetings, normally by mid-April.
- Instructors for whom the student has served as a teaching assistant provide comments on their teaching. (If instructors have previously provided feedback as part of fellowship or other applications, they needn’t do so again.) Comments must be submitted at least one week before scheduled meetings, normally by mid-April.

All reports and comments will be submitted to the designated departmental staff person, who will schedule a review meeting for each student with a member of the GPC (not including the advisor or, preferably, other members of the student’s committee), normally between mid-April and mid-May.

Following the meetings, comments and suggestions will be shared with the student and advisor, as well as the Program Coordinator. If there is material in the comments that is
confidential or should **not** be shared, it may be withheld at the discretion of the Program Coordinator.

Students who do not complete the review process by the specified date will have a hold placed on their registration by the Graduate School until they have resolved the situation.

**Completing the degree**

As a graduate student, you are responsible for knowing what you need to do to get your degree: your advisor and committee should offer guidance, but the primary responsibility is yours. Make sure you are thoroughly familiar with:

- the program’s academic requirements (credits, courses, competencies);
- necessary paperwork (committee nomination, Ph.D. candidacy, etc.);
- thesis/dissertation format and filing requirements (set by the Graduate School);
- format and scheduling procedures for qualifying exams and thesis/dissertation defense; and all relevant deadlines.

If you have questions about what you need to do, or how to do it, consult your advisor, the Program Coordinator, and/or the UNH Graduate School. If there is information you think needs to be added or clarified in this handbook, please tell the Program Coordinator.

For both the MS thesis and Ph.D. dissertation students are required to give a public, advertised seminar on the UNH campus, followed by a private examination by the student’s committee, which may require revisions. The committee is responsible for assessing and approving the final version of the thesis. The committee should be provided with a complete copy of the thesis for review at least two full weeks before the defense.

The student is responsible for transmitting necessary paperwork to the Graduate School, and fulfilling Graduate School requirements for electronic submission of the thesis, by the appropriate deadline.

**Graduation**

The Graduate School website provides detailed information on graduation procedures, including deadlines, filing “intent to graduate” notification, submitting theses/dissertations to the Graduate School, and Commencement: [http://www.gradschool.unh.edu/graduation.php](http://www.gradschool.unh.edu/graduation.php)

**4. Financial support**

**General information**
Graduate students in the program normally receive most of their support from a combination of assistantships and fellowships. There are several types of assistantships: Teaching Assistants (TAs) run labs and do grading and other tasks for undergraduate classes; Research Assistantships (RAs) support students working on a faculty member’s project (20 hours/week); and students may be supported as Project Assistants (PAs) on their advisors’ external grants. See Chapter 5 for more information about assistantships.

Institutional support during the summer is not guaranteed at the time of admission; however, summer support is available from several sources, e.g.

- The Graduate School offers competitive summer fellowships for TAs (see below). Since these fellowships provide only partial support, advisors are strongly encouraged to make up the difference from other sources for their students who win fellowships. (To quote an old Harvard staff union slogan, “you can’t eat prestige.”)

- Advisors often have other sources of funds with which to provide summer support.

Students are strongly encouraged to apply for independent fellowship support, as well as for funding to pay for research expenses, travel, etc. Obtaining independent funding is professionally as well as financially useful. See “useful links” below for some ideas about how to get started.

Program policies and expectations

Subject to satisfactory progress by the student, the Biological Sciences Graduate Program provides financial support up to the limit stated in the admission letter: normally two years (four semesters) of academic-year support for the M.S. degree and four years (eight semesters) of academic-year support for the Ph.D. A student who completes an M.S. and then continues as a Ph.D. candidate, or who converts from M.S. to Ph.D. enrollment, may anticipate a total of four years of support from the program.

Additional support may be available based on a clear need arising from the nature of the research (e.g. field projects that require two summers of data), and evidence of strong progress toward completion. A decision to request additional support must be made by the start of the final semester of guaranteed support. Where there is a compelling reason for an extension, the student’s advisor must present a written request for one additional semester of support from the program, explaining why the student needs more time to complete the degree.² The Admissions Committee and Chair will review and decide on such requests. Approval is not automatic: students and advisors should not assume that extended support will be available if the degree is not completed on time.

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² A form for requests is available online at [https://colsa.unh.edu/dbs/biological-sciences-graduate-program](https://colsa.unh.edu/dbs/biological-sciences-graduate-program).
Since one purpose of limiting the duration of support is to encourage students to complete their degrees on schedule, students initially supported in other ways who later receive a Teaching or Research/Project Assistantship may not be entitled to the full duration of support stated above. All students will be advised of the extent of support they may expect at the time of admission.

Teaching or Research/Project Assistantship appointments (see Chapter 5) are normally for the academic year, but can be terminated at the end of a semester if performance is unsatisfactory. With satisfactory performance in both research and teaching, the student, once appointed to an assistantship, can expect to be reappointed in subsequent years up to the limit specified upon admission.

Students who obtain their own funding (e.g. through a competitive fellowship, or part-time students working for state or federal agencies) are not penalized by a reduction of support from the program: they are still entitled to the full number of semesters stated in their admission letter.

**Support for graduate student travel and research expenses**

**The program has some funds available to support student travel.** The student needs to submit a formal request to the Chair, detailing what meeting they are planning on attending, when and where the meeting will take place, whether they are presenting a poster or giving a talk, and a solid estimate of costs for meals, housing, etc. The Program will help pay for travel only if a student presents a poster or gives a talk -- not if they are just attending the meeting. In the past, travel grants have been for up to $250. Students can request this once in a single fiscal year.

**The Graduate School offers travel grants** for graduate students who are presenting papers and posters at professional meetings and conferences. They generally do not support travel to workshops, seminars, and conferences where students are not presenting, but will consider such requests where the nature of the program is directly related to the student’s research agenda at UNH. Travel grants are also available to students who are attending professional development workshops and seminars that will enhance their research agendas. Travel grants will not exceed $200 per student per conference, or $400 per student per year. [https://www.gradschool.unh.edu/php/travel_grant.php](https://www.gradschool.unh.edu/php/travel_grant.php)

See “Useful links” below for more possibilities.

**UNH Graduate School fellowships**

Students are strongly encouraged to apply for the UNH Graduate School’s Summer TA Fellowship (provides partial support for one summer) and Dissertation Year Fellowship (provides support for the final year of Ph.D. work). Detailed information is available at [http://www.gradschool.unh.edu/pdf/frm_aid.php](http://www.gradschool.unh.edu/pdf/frm_aid.php).
Pre-application for Summer TA Fellowships. Summer TA Fellowships are allocated mainly on the basis of merit, but there is also consideration given to distributing them across programs – in fact, the Graduate School requires each program to rank their students who are applying, before applications are submitted. The likelihood of lots of students from the same program receiving awards is extremely low; rather, programs are most successful when they put forward a short list of their strongest applicants. To enable students and letter-writers to focus their time and energy where it will be most likely to pay off, the Biological Sciences Program has instituted a pre-application procedure.

The Awards and Scholarship Committee is responsible for pre-applications and ranking, and will publicize the procedure to be followed, including a due date for pre-application materials. Note that students who do not follow this procedure will automatically be ranked at the bottom of the list of applicants from the program.

Useful links

- UNH Graduate School information on Graduate Appointments, fees and financial support: https://catalog.unh.edu/graduate/general-information/fees-financial-support/ (scroll down)
- UNH Financial Aid Office: financialaid.unh.edu/
- UNH Graduate School financial aid info https://gradschool.unh.edu/admissions/financial
- UNH Office of National Fellowships: www.unh.edu/fellowships-office/
- UNH Graduate School Information on Dissertation Year Fellowships, Summer Teaching Assistant Fellowships and Travel Grants: www.gradschool.unh.edu/pdf/frm_aid.php
- UNH Research Office links for grad students (https://www.unh.edu/research/resources-graduate-students-seeking-funding)
- UNH Research Office general advice about finding funding (https://www.unh.edu/research/find-funding-0)
- Funding opportunities available through the School of Marine Sciences and Ocean Engineering: marine.unh.edu/funding-and-opportunities
- National Science Foundation Graduate Research Fellowship Program (https://www.nsfgrfp.org/)
  Very prestigious and very competitive; watch for announcements from the Graduate School about information sessions and proposal preparation support. Also track down the current UNH graduate students who’ve won them!

Emergency Funds

DBS does have some emergency funding to help graduate students defray the costs of major life events. If you are interested in requesting emergency funds from the department, please contact the program coordinator or senior departmental administrator to find out more information and process for application.
5. Graduate Assistantships: Teaching, Research, and Project

UNH Graduate School Graduate Assistant handbook

The GA Handbook provides detailed information on registration requirements, policies, workload, and other critical topics related to assistantships. The handbook is regularly revised and updated; please contact the Graduate School or search their website for a current version.

Essential policies are stated in the Graduate Catalog: https://catalog.unh.edu/graduate/

Teaching Assistantships, Research Assistantships, and Project Assistantships cover a stipend, health insurance, and the technology fee. Students are responsible for other mandatory fees.

Teaching Assistantships

An opportunity to teach is an important part of every graduate student's education. Most students in the program receive support as Teaching Assistants during at least part of their enrollment. Students not offered a teaching assistantship at the commencement of their enrollment are considered whenever positions become available, but presence in the program is not a guarantee of support.

Teaching Assistants are half-time employees (20 hrs/week), with considerable responsibilities to their students and to the department/program. Teaching Assistantships are awarded by the Department Chair in consultation with the GPC. The process is complicated: it involves balancing teaching needs, student expertise, and fair allocation of resources.

A Teaching Assistant’s performance is evaluated by the students in the course, who complete a formal course evaluation at the end of the semester. The results are available for the Teaching Assistant and the course supervisor. In addition, the instructor in whose course you serve as a TA should provide written evaluation and feedback at the end of the semester: this information is important for your annual progress review as well as for applications for Summer TA Fellowships (see Chapter 4).

Poor performance as a Teaching Assistant may jeopardize continued funding.

Research and Project Assistantships

Research/Project Assistantships may be available on specific research projects supported by external grants or contracts. Responsibility for filling a Research or Project Assistantship rests with the faculty member who administers the grant, with the proviso that any RA/PA appointed must be acceptable for admission as a graduate student. Tuition waivers are usually available for Research Assistants. The duration of support on an Assistantship is determined by the
faculty member administering the grant. A student who makes insufficient progress or whose academic performance is unsatisfactory may be dismissed from the program even though RA support remains available.

It is critical that the RA/PA and the project supervisor communicate clearly about expectations and responsibilities. Students owe the project that pays them 20 hours per week, as a condition of their appointment; but if it overlaps their own research (as is often the case), they may well be working on it much more than that.

7. Responsible Conduct of Research and Other UNH Policies

Graduate students, like all other researchers, must comply with all rules and policies that are relevant to their work. It’s your responsibility to know about, and follow, the rules that may apply to your project. Begin by consulting your advisor, but be aware that you may have to deal with additional issues, if your project extends beyond your advisor’s (e.g. they work on inverts but your project will also involve fish; or they work on crops, but you will also be interviewing farmers). The go-to place for information – for instance, figuring out exactly which rules and policies apply to your research – is Research Integrity Services (https://www.unh.edu/research/support-units/research-integrity-services). Check out their research compliance infographic: https://www.unh.edu/research/unh-research-support-matrix-compliance-and-safety.

Requirements and training

All new Ph.D. students and students who have changed to a Ph.D. program are required to attend the Responsible Conduct of Research Training. Information is at https://gradschool.unh.edu/research/responsible-conduct-research/rcr-training.

If you work with vertebrate animals in any aspect of your research or teaching, you need prior approval from the Institutional Animal Care and Use Committee, as well as the required training (online module and in-person session). This includes field and observation studies as well as lab work and research with domesticated animals. If your research supervisor or the person for whom you are TAing already has approval for the activity, you just need to do the training and submit the medical questionnaire – then you can be added to their approval. Details and forms are available at http://www.unh.edu/research/animal-care-use.

If your research will involve human subjects in any way (including surveys), you should check if you will need approval from the Institutional Review Board. See https://www.unh.edu/research/human-subjects.
Student rights and key policies

UNH’s statement on Student Rights, Rules, and Responsibilities applies to graduate students as well as to undergraduates. It can be found at https://www.unh.edu/student-life/student-rights-rules-responsibilities

The following UNH policies can impact student roles (in some cases, particularly as graduate assistants):

**Academic Honesty.** Honesty is a core value at UNH. Policy: [https://catalog.unh.edu/graduate/academic-regulations-degree-requirements/academic-honesty/](https://catalog.unh.edu/graduate/academic-regulations-degree-requirements/academic-honesty/).

**Consensual Amorous Relationship Policy.** This policy provides guidelines designed to prevent conflicts of interest that can occur when two members of the UNH community whose institutional roles place them in an uneven power dynamic engage in a consensual amorous relationship.

**Discriminatory Harassment Policy.** It is the policy of the University of New Hampshire to uphold the constitutional rights of all members of the university community and to abide by all United States and New Hampshire State laws applicable to discrimination and harassment. In accordance with those laws, all members of the UNH community will be responsible for maintaining a university environment that is free of intimidation and harassment. Therefore, no member of UNH may engage in harassing behavior within the jurisdiction of the university that unjustly interferes with any individual’s required tasks, career opportunities, learning, or participation in university life. As employees of the university and as graduate students, graduate students are protected under the policies UNH has put in place to discourage, to investigate, and to address instances of harassment.

Graduate assistants should also take responsibility for conducting themselves professionally, and should be aware of the ways that power dynamics shape their various roles at UNH. If charges against a graduate assistant are brought forward by a fellow graduate or an undergraduate student, the person making the charge may choose between pursuing charges under the policy outlined in the Student Code of Conduct or under the Discriminatory Harassment Policy as enforced by the Office of Affirmative Action. Published by the Affirmative Action Office, this document contains information about UNH’s harassment policy, offers examples of harassment and provides outlines of guidelines and procedures.

**Family Rights and Privacy Act of 1974:** Graduate assistants should be aware of confidentiality issues as they pertain to student records, both their own and those of others, such as students enrolled in a TA-taught course. Social security numbers and grades are protected by federal law under the Family Educational Rights and Privacy Act of 1974, often referred to as the “Buckley Amendment.” The University System Policy relative to the Buckley Amendment is found in the Student Rights, Rules and Responsibilities bulletin published each Fall.
University Specific Sexual Assault Reporting Requirements: These requirements are available through UNH’s Sexual Harassment & Rape Prevention Program: http://www.unh.edu/sharpp/reporting-requirements

Title IX Prohibiting Sex-based Discrimination in Education: There are specific rights pertaining to sexual violence and harassment that are covered by federal law. Title IX is a landmark federal civil right that prohibits sex-based discrimination in education. Part of the law addresses sexual harassment, gender-based discrimination, and sexual violence. Sexual violence includes attempted or completed rape or sexual assault, as well as sexual harassment, stalking, relationship abuse, voyeurism, exhibitionism, and verbal or physical sexuality-based threats or abuse. Inquiries regarding discrimination should be directed to: UNH Director & Title IX Coordinator of Affirmative Action and Equity.

Health Insurance Requirement: All full-time degree students are required to have health insurance as a condition of enrollment. Thus, graduate students who are registered for any of the following during a semester are required to have health insurance, and will be automatically enrolled and billed in the student health benefit plan (SHBP) unless they waive it because they already have their own health insurance:
- 9 or more credits (6 credits if on assistantship)
- GRAD 900 (master’s continuing research)
- DEPT 999 (doctoral research)

Students must waive the SHBP annually; the waiver form is available at http://www.unh.edu/health-services/shbp. This site also includes information on the plan’s cost, coverage, and other important details.

8. Resources for Graduate Students

Whom to ask

When you need information, ask someone: your advisor, committee members, other faculty, the graduate coordinator, office and technical support staff. Senior graduate students know the local ropes; post-docs can often provide excellent professional and career guidance.

If you are experiencing advisor-related issues, you can discuss the matter with the graduate coordinator and/or with the department chair; you can contact Grad School Associate Dean Dovev Levine (dovev.levine@unh.edu); you can also meet with the Dean of the Graduate School, Dr. Cari Moorhead (cari.moorhead@unh.edu; 862-3007).

Program contacts and Information:
- Administrative staff: Lisa Buchalski, lisa.buchalski@unh.edu, (603)862-3626
- Associate Chair: Elizabeth Harvey, elizabeth.harvey@unh.edu, (603)862-3418
• Graduate Program Coordination & Admissions Committee (check with the department for current membership and option representatives).
• Program Faculty – see Appendix 5.
• Program web site: general academic information at https://colsa.unh.edu/biological-sciences/academics (scroll to the bottom for grad programs); copies of useful forms, faculty listing, and key links for current grad students and advisors at https://colsa.unh.edu/biological-sciences/key-documents.

Graduate Program Coordination and Admissions Committee (GPC)

This committee, chaired by the Graduate Coordinator, oversees the standards and implementation of the graduate program. Membership consists of the Associate Chair, the program coordinators for each graduate program, and one additional faculty member from each option.

The GPC is responsible for establishing universal guidelines for all graduate students in each degree (M.S. and Ph.D.), and brings forth suggestions for changes in policies pertaining to the program. The GPC welcomes input and suggestions from graduate students as well as faculty and staff. The GPC also oversees annual Progress Reviews for graduate students in the program (see Chapter 3). Graduate students should feel free to approach the Graduate Coordinator or another member of the committee for advice at any time, although ordinarily the student's faculty advisor and committee serve as the primary contact.

Mental Health & Wellness

Graduate school is hard -- and other challenges that have nothing to do with school may arise while you're here (personal, family, and other issues). If school, life, or the combination is taking a toll on your well-being, don't suffer in silence: reach out for help. If you're doing fine but your friend or colleague isn't - help them reach out.

If it's an emergency, go here https://www.unh.edu/pacs/services/crisis-emergency-services and/or call (603) 862-2090 (Relay NH: 1-800-735-2964) (staffed 24/7 -- press 0 to speak to a counselor).

More info from the PACS webpage:

If you are feeling that you are a danger to yourself and/or others, visit PACS immediately or call (603) 862-2090 and dial 0 (Relay NH: 1-800-735-2964) to speak to a counselor if the center is physically closed. If you are not comfortable doing so, contact the National Suicide Prevention Lifeline at 1-800-273-TALK, a free crisis hotline, or go to your local emergency room.

Emergency Numbers

• Psychological and Counseling Services (PACS):(603) 862-2090
Here are some of the UNH people and organizations that help support graduate students:

- **Psychological and Counseling Services (PACS)** offers individual counseling, group counseling, consultations, and online resources to the UNH community. Graduate students who have paid their mandatory fees are eligible for up to 8 individual sessions per semester, and unlimited group counseling sessions (we highly recommend the Graduate Student Support Group!). Check out their virtual care package to get the details.

  PACS main page: [https://www.unh.edu/pacs/](https://www.unh.edu/pacs/)
  Virtual Care Package: [https://www.unh.edu/pacs/resources/virtual-care-package](https://www.unh.edu/pacs/resources/virtual-care-package)
  *(tons of information about what is available through PACS, and elsewhere, including resources specifically related to mental health and covid-19, online resources for LGBTQ+ folks, and much else)*

- You may want to talk to your advisor, grad program coordinator, department chair or another trusted faculty or staff member: most of us aren't trained mental health professionals, but we care deeply about our students and will do our best to help you get the support you need. If you're struggling, *let someone know* so we can try to help. Honestly, struggling with your mental health is a pretty normal part of graduate school...most of us have been there ourselves at one time or another.

- If you are experiencing advisor-related issues, you can discuss the matter with the graduate coordinator and/or the department chair/associate chair; you can also contact Grad School Assistant Dean Dovev Levine ([dovev.levine@unh.edu](mailto:dovev.levine@unh.edu))

- Dr. Dovev Levine ([dovev.levine@unh.edu](mailto:dovev.levine@unh.edu); [https://gradschool.unh.edu/person/dovev-levine](https://gradschool.unh.edu/person/dovev-levine)) is officially the Assistant Dean for Student Affairs at the Grad School - and unlike most faculty, he *does* have professional training in counseling and mental health. Moreover, despite his long professional title, he is super-nice and very, very approachable.

**Graduate School Resources**

The Graduate School offers a variety of resources for students, including the following professional development opportunities. Current information, including workshop dates, is available on the Graduate School’s website [https://gradschool.unh.edu](https://gradschool.unh.edu).

The Graduate School sends a weekly email highlighting upcoming programs, events, opportunities, and deadlines that are important for graduate students. **READ IT.**
Preparing Future Faculty & Preparing Future Professionals Programs
The Preparing Future Faculty Program (PFF) is a national initiative that transforms the way doctoral programs prepare aspiring faculty members for their careers. It emphasizes an education that is informed by the kinds of responsibilities faculty members actually have at a variety of institutions. The 2014-2015 Preparing Future Faculty Highlights flyer illustrates the types of events commonly hosted as part of our PFF program.

The Preparing Future Professionals Program (PFP) is designed to provide all graduate students with access to workshops, speakers and other events focused on professional skills and preparation for successful job searches and career advancement (workshops on preparing CV’s, interviewing for positions, etc.).

For current PFF and PFP information visit https://gradschool.unh.edu/graduate-student-resources/events-professional-development or contact the Graduate School office at (603) 862-3009.

UNH Summer Program on College Teaching
The UNH Graduate School and the Center for Excellence in Teaching and Learning co-sponsor the Summer Program on College Teaching. The program features both on-campus courses and electronic, asynchronous courses. Course offerings are available at the Summer Program on College Teaching website.

Thesis and Dissertation Workshops
The Graduate School holds monthly information sessions on the rules and processes for formatting and submitting final theses and dissertations. Dates are posted on the Graduate School homepage (https://gradschool.unh.edu/graduate-student-resources).

Graduate Research Conference
Each April, over 200 UNH graduate students from all academic disciplines present at the GRC, or during their program’s research symposia. The presentations showcase the results of graduate research at UNH’s Durham and Manchester campuses. https://www.gradschool.unh.edu/grc.php

Graduate Student Senate
Graduate students are encouraged to participate in the Graduate Student Senate (GSS), the official voice of UNH’s graduate student body. The GSS advocates for graduate students and meets bi-weekly throughout the academic year. It also fosters community and social engagement among graduate students via an array of activities. Information and the calendar of GSS events is available at http://www.unh.edu/gss/.
## Appendix 1: M.S. degree timeline and checklist (both options)

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year One</strong></td>
<td></td>
</tr>
<tr>
<td>Meet with advisor</td>
<td>at or before start of 1st semester</td>
</tr>
<tr>
<td>BIOL 901 (Intro Grad Seminar)</td>
<td>first fall semester</td>
</tr>
<tr>
<td>Form thesis committee</td>
<td>by end of 1st semester</td>
</tr>
<tr>
<td>MS thesis proposal</td>
<td>by end of 2nd semester</td>
</tr>
<tr>
<td>Annual progress review by GPC</td>
<td>spring semester</td>
</tr>
<tr>
<td>First committee meeting</td>
<td>spring semester</td>
</tr>
<tr>
<td><strong>Second Year</strong></td>
<td></td>
</tr>
<tr>
<td>Formal committee meeting</td>
<td>once per semester</td>
</tr>
<tr>
<td>Thesis defense: public seminar, oral exam by committee</td>
<td></td>
</tr>
<tr>
<td>File intent to graduate form</td>
<td>by Graduate School deadline: <a href="https://gradschool.unh.edu/graduate-student-resources">https://gradschool.unh.edu/graduate-student-resources</a></td>
</tr>
<tr>
<td>Submit thesis</td>
<td>by Graduate School deadline</td>
</tr>
<tr>
<td>Complete 30 total credits (at max 10 research)</td>
<td>at completion</td>
</tr>
<tr>
<td><strong>Possible Additional Year(s)</strong></td>
<td></td>
</tr>
<tr>
<td>Formal committee meeting</td>
<td>once per semester</td>
</tr>
<tr>
<td>Annual progress review by GPC</td>
<td>spring semester (not required in final year)</td>
</tr>
<tr>
<td>File intent to graduate form, submit thesis to Graduate School</td>
<td>by Graduate School deadlines</td>
</tr>
</tbody>
</table>
Table 1: Ph.D. degree timeline and checklist (both options)

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meet with advisor</td>
<td>at or before start of 1st semester</td>
</tr>
<tr>
<td>Responsible Conduct of Research training</td>
<td>first semester</td>
</tr>
<tr>
<td>BIOL 901 (Intro Grad Seminar)</td>
<td>first fall semester</td>
</tr>
<tr>
<td>PhD thesis guidance committee formed</td>
<td>end of 1st semester</td>
</tr>
<tr>
<td>Annual progress review by GPC</td>
<td>spring semester</td>
</tr>
<tr>
<td>First committee meeting</td>
<td>spring semester</td>
</tr>
<tr>
<td>Teaching/mentoring experience</td>
<td>(may be any year)</td>
</tr>
<tr>
<td>Formal committee meeting</td>
<td>once per year</td>
</tr>
<tr>
<td>Ph.D. dissertation proposal</td>
<td>by end of 2nd year</td>
</tr>
<tr>
<td>Annual progress review by GPC</td>
<td>spring semester</td>
</tr>
<tr>
<td><strong>Year Two</strong></td>
<td></td>
</tr>
<tr>
<td>Qualifying exam (oral and written components)*</td>
<td>by end of fifth semester</td>
</tr>
<tr>
<td>Advancement to candidacy</td>
<td>By end of fifth semester</td>
</tr>
<tr>
<td>PhD Dissertation Committee formed</td>
<td>upon advancement to candidacy</td>
</tr>
<tr>
<td>Ph.D. defense: public seminar, oral exam by committee</td>
<td>in final year</td>
</tr>
</tbody>
</table>

*Should be finished all courses before taking qualifying exam.
Appendix 3: Integrative Biology Graduate Program Course Requirements

Reflecting a commitment to integrating multiple aspects of biology, course requirements are organized as categories, rather than prescribed classes. The curriculum is intended to be flexible so it can be tailored to the needs of individual students, with the guidance of their advisor and committee. For details, and specific courses that can be used to fulfill category requirements, see table below.

Core curriculum:
- Introductory seminar (BIOL 901)
- Two courses in experimental design, analytical tools or methods: statistics, qualitative research, programming (particularly R and other open-source tools), GIS, etc.
- One course in writing or communication; with approval of advisor and committee, may be fulfilled by participation in a multi-session workshop such as the UNH Research Communication Academy or an external program.
- One course in ethics, philosophy, or social impacts of science, in addition to participation in UNH’s required RCR training. GRAD 930 may be used to satisfy both the UNH and the program requirements.
- Students are strongly encouraged to participate in (and propose) upper-level "special topics" seminars, both within and beyond their home department.

The courses listed below should be considered examples rather than exact requirements.

<table>
<thead>
<tr>
<th>Area</th>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
<th>Offered</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BIOL 901</td>
<td>Introductory Graduate Seminar</td>
<td>2</td>
<td>Fall</td>
<td>Rotates</td>
</tr>
<tr>
<td><strong>Experimental design &amp; analysis</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 835</td>
<td>Statistical Methods for Research</td>
<td>3</td>
<td>Fall</td>
<td>Math Dept.</td>
<td></td>
</tr>
<tr>
<td>MATH 836</td>
<td>Advanced Statistical Methods for Research</td>
<td>3</td>
<td>Spring</td>
<td>Poythress</td>
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</tr>
<tr>
<td>MATH 859</td>
<td>Introduction to the R Software</td>
<td>1</td>
<td>Spring</td>
<td>Linder</td>
<td></td>
</tr>
<tr>
<td>SOC 904</td>
<td>Qualitative &amp; Historical Research Methods</td>
<td>4</td>
<td>Spring</td>
<td>Day</td>
<td></td>
</tr>
<tr>
<td>NR 909</td>
<td>Analysis of Ecological Data</td>
<td>4</td>
<td>Spring</td>
<td>Smith</td>
<td></td>
</tr>
<tr>
<td>NR 913 (01)</td>
<td>Hierarchical Modeling in Ecology</td>
<td>4</td>
<td>Spring</td>
<td>Moll</td>
<td></td>
</tr>
<tr>
<td>BIOL 811</td>
<td>Applied Biostatistics II</td>
<td>4</td>
<td>Spring</td>
<td>Neefus</td>
<td></td>
</tr>
<tr>
<td>ANFS 933</td>
<td>Design, Analysis &amp; Interpretation of Experiments</td>
<td>4</td>
<td>Spring</td>
<td>Hale</td>
<td></td>
</tr>
<tr>
<td>BIOL 806</td>
<td>Data Science with R for the Life Sciences</td>
<td>4</td>
<td>Fall</td>
<td>White</td>
<td></td>
</tr>
<tr>
<td>EDUC 904</td>
<td>Qualitative Inquiry in Research</td>
<td>4</td>
<td>Fall</td>
<td>Coppens</td>
<td></td>
</tr>
<tr>
<td><strong>Writing &amp; communication</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIOL 902</td>
<td>Scientific Writing</td>
<td>2</td>
<td>Fall</td>
<td>Bolker</td>
<td></td>
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<tr>
<td>BIOL 950</td>
<td>Scientific Communication</td>
<td>2</td>
<td>Spring</td>
<td>Bolker</td>
<td></td>
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<tr>
<td>GRAD 932</td>
<td>Research Communication</td>
<td>2</td>
<td>Summer</td>
<td>Bolker</td>
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<tr>
<td>NR 905</td>
<td>Grantwriting</td>
<td>2</td>
<td>Spring</td>
<td>Wollheim</td>
<td></td>
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<tr>
<td>ANFS 895</td>
<td>Thesis Writing</td>
<td>1</td>
<td>Spring</td>
<td>Poleatewich</td>
<td></td>
</tr>
<tr>
<td><strong>Ethics, Philosophy, and Social Impacts</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GRAD 930</td>
<td>Research Ethics</td>
<td></td>
<td>Spring</td>
<td>Simpson</td>
<td></td>
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<tr>
<td>BIOL 814</td>
<td>Model Organisms in Biological &amp; Medical Research</td>
<td>2</td>
<td>Spring</td>
<td>Bolker</td>
<td></td>
</tr>
<tr>
<td><strong>Special Topics Seminars</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIOL 997</td>
<td>Current Topics in Integrative Biology</td>
<td>2</td>
<td>either</td>
<td>DBS staff</td>
<td></td>
</tr>
</tbody>
</table>

Rev. June 28, 2021/JAB
| Topical seminars in other programs/departments (as appropriate; determined with advisor) |
Appendix 4: Marine Biology Graduate Program Course Requirements

Reflecting a commitment to integrating multiple aspects of aquatic science, and to preparing students with skills and knowledge that enable them to pursue a wide range of career options after they graduate, course requirements are presented as categories, rather than prescribed classes. The curriculum is intended to be flexible so it can be tailored to the needs of individual students, with the guidance of their advisor and committee. For details, and specific courses that can be used to fulfill category requirements, see table below.

**Core curriculum:**
- Introductory seminars (BIOL 901 & MARI 901)
- At least two courses in Contemporary techniques – one course MUST be a STATS designation
- At least one course in writing or communication
- At least one marine-based course
- Students will be required to gain field experience either through field work that is related to their thesis research, or through experiential-learning in a course with a FIELD designation.
- Ph.D. students will also be required to TA for at least one semester

**Marine Biology Course List**

The courses listed below should be considered examples rather than exact requirements. The availability (and prefixes, and numbering) of specific courses changes over time; once the program is established, it will be the responsibility of the program faculty to determine what courses are acceptable in each category and make any other necessary adjustments.

<table>
<thead>
<tr>
<th>Competency</th>
<th>Course</th>
<th>Title</th>
<th>Cred.</th>
<th>Offered</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seminar</td>
<td>MARI XXX</td>
<td>Frontiers in Marine Science</td>
<td>1</td>
<td>Fall</td>
<td>MBGP</td>
</tr>
<tr>
<td></td>
<td>BIOL 901</td>
<td>Introductory Graduate Seminar</td>
<td>2</td>
<td>Fall</td>
<td>DBS</td>
</tr>
<tr>
<td>Contemporary techniques</td>
<td>STATS BIOL 811</td>
<td>Experimental Design and Analysis</td>
<td>4</td>
<td>Spring</td>
<td>Neefus</td>
</tr>
<tr>
<td></td>
<td>BIOL 806</td>
<td>Data Science with R for the Life Sciences</td>
<td>4</td>
<td>Fall</td>
<td>White</td>
</tr>
<tr>
<td></td>
<td>NR 913</td>
<td>Hierarchical Modeling in Ecology</td>
<td>4</td>
<td>Spring</td>
<td>Moll</td>
</tr>
<tr>
<td></td>
<td>MATH 835</td>
<td>Statistical Methods for Research</td>
<td>3</td>
<td>Fall</td>
<td>Li</td>
</tr>
<tr>
<td></td>
<td>MATH 836</td>
<td>Advanced Statistical Methods for Research</td>
<td>3</td>
<td>Spring</td>
<td>Zhang</td>
</tr>
<tr>
<td></td>
<td>MATH 839</td>
<td>Applied Regression Analysis</td>
<td>3</td>
<td>Fall</td>
<td>Capozzoli</td>
</tr>
<tr>
<td></td>
<td>NR 909</td>
<td>Analysis of Ecological Data</td>
<td>4</td>
<td>Spring</td>
<td>Smith</td>
</tr>
<tr>
<td></td>
<td>ANFS 933</td>
<td>Design, Analysis, and Interpretation of Experiments</td>
<td>4</td>
<td>Spring</td>
<td>Hale</td>
</tr>
<tr>
<td></td>
<td>MATH 944</td>
<td>Spatial Statistics</td>
<td>3</td>
<td>Fall</td>
<td>Linder</td>
</tr>
<tr>
<td></td>
<td>NR 857</td>
<td>Remote Sensing of the Environment</td>
<td>4</td>
<td>Fall</td>
<td>Congalton</td>
</tr>
<tr>
<td></td>
<td>NR 859</td>
<td>Digital Image Processing for Natural Resources</td>
<td>4</td>
<td>Spring</td>
<td>Congalton</td>
</tr>
<tr>
<td></td>
<td>NR 807</td>
<td>Environmental Modeling</td>
<td>4</td>
<td>Spring</td>
<td>Wollheim</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Term</td>
<td>Instructor</td>
<td></td>
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**Writing & communication**

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**Marine-based**

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