

Department of Biological Sciences

Graduate Student Handbook¹

POLICIES AND PROCEDURES OF THE GRADUATE DEGREE PROGRAMS
FOR THE ACADEMIC YEAR 2022-2023

¹*Effort has been made to provide accurate and current information; however, the right is reserved to change any of the policies, rules, and regulations set forth in this document at any time. All of these changes may become effective immediately after their approval.* 8/03/2022

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Philosophy

The Department of Biological Sciences strives to provide a scholarly environment where faculty and students are stimulated to become productive scientists and educators. To inspire individual thinking and imagination, which are critical skills in the sciences, we encourage variability among students in their individual graduate programs. The principal aim of the Department's graduate programs is to help students achieve the highest level of their scientific potential and become thoughtful, productive, and responsible members of their scientific community.

Admission

Candidates must submit an application form (and a nonrefundable application fee) to the Graduate School. Departmental review of graduate applications will take place by:

- October 1 for the subsequent Spring semester
- February 15 for the subsequent Summer or Fall semesters
- June 15 for the subsequent Fall semester

Applicants are strongly encouraged to communicate with any faculty member within the department who would serve as the applicant's major advisor. Recommendations concerning acceptance or rejection are made by the Department of Biological Sciences and by the Graduate School.

The Department follows the standards for admission outlined in the Graduate Bulletin. Criteria used in evaluating an application are grades, level of coursework, Graduate Record Examination scores, three letters of recommendation, the applicant's curriculum vitae, and a statement of research interests and professional goals. Information from all of the application materials is used to evaluate the applicant, but generally a grade point average (GPA) of 3.0 or above (A=4.0) is necessary for unconditional acceptance into the Department. Conditional acceptance is possible for applicants who do not meet the departmental requirements. Finally, a faculty member should be willing to serve as an applicant's major advisor.

Degrees

The Department offers programs leading to Master of Science degree in Biological Sciences and Doctor of Philosophy degree in Biological Sciences. A Master of Science may be earned in either of two options: the Thesis Option or the Comprehensive Study Option. See the Department Chair for information on the Comprehensive Study Option. The Department also participates in interdisciplinary programs in Natural Resource Management, Environmental and Conservation Sciences, Cellular and Molecular Biology, Genomics and Bioinformatics, STEM Education and College Teaching Certificate.

Official Graduate School policies and requirements can be found here for both M.S. and Ph.D. degrees:

<https://bulletin.ndsu.edu/programs-study/graduate/biological-sciences/>

Financial Aid

Students who desire to be considered for a research assistantship (RA), teaching assistantship (TA), or some other form of aid should so indicate on the graduate application. TA's and RA's are at a premium; thus, students interested in such an appointment must file a completed application as early as possible.

Students interested in need-based financial aid, loans, or work study opportunities should check with the Financial Aid Office.

Teaching Assistantships

A graduate teaching assistant (TA) is expected to devote an average of 20 hours weekly to departmental duties to fulfill the work requirements of his/her assistantship. TAs are expected to be present and available to fulfill their duties during their entire contract period. Fall semester TA contracts begin in mid-August and run through mid-December. Spring semester TA contracts begin in early January and run through mid-May. TAs are not entitled to vacation or leave during this time. Short leave time for duties related to their research project (such as attending a conference or a short data collection trip) may be considered, but must be cleared with both the work supervisor(s) and major advisor well in advance of the requested leave time.

Students admitted to advanced degree programs in the Department of Biological Sciences are normally supported throughout their tenure as graduate students. However, reappointment as a TA is not guaranteed. Appointments are generally made for one academic year (August 16 to May 15) but are reviewed every semester. Continuance is subject to the availability of TA positions and the student's performance as an assistant, the student's record of scholarship (i.e. submission of grant proposals and manuscripts), and evidence that the student is meeting expectations (see below). A student must maintain a GPA of 3.0 or above in graduate level courses to continue his/her teaching assistantship. TAs must receive student evaluations of their performance in courses. (note: some TAs assignments do not receive SROI evals, i.e. 452/652, 456/656, 454,654, 458,658, 270) It is the responsibility of the TA to ensure that he or she is eligible for continued appointment.

The Department of Biological Sciences has a 3-strikes policy for TAs. If a TA does not show up on time to teach their assigned lab section or to attend a mandatory TA meeting, the Faculty Lab Coordinator will notify the graduate student and the student's major advisor by email that this is unacceptable behavior. If a graduate student receives three such emails during their time as a student in our department, they will not be allowed to receive a Teaching Assistantship from our department.

TA duties for teaching lab sections

- a. Teach lab sections assigned by the department according to teaching protocols developed by the Faculty Lab Coordinator
- b. Grade and provide feedback on all assignments associated with lab sections you are teaching
- c. Maintain Blackboard site (or other appropriate class management web site) for each lab section taught, where students can access

- i. Class announcements
 - ii. Class materials
 - iii. Assignment grades
- d. Assist in preparing lab materials and assignments, as needed
- e. Attend mandatory weekly TA training meetings and participate in other training requirements as required by the Faculty Lab Coordinator
- f. Provide students opportunities to make-up labs, as needed
- g. Assist with preparation of and set-up of materials for each week's lab
- h. Assist with clean-up of lab rooms and disposal of materials at the end of each week
- i. Properly handle and dispose of all hazardous waste
- j. Other duties as assigned by the Faculty Lab Coordinator.

Research Assistantships

Research assistants (RAs) are half-time employees of the Department and are usually paid from research grant funds. Typically research is conducted under the supervision of the principal investigator who generated the salary funds. In most cases, the 20 hours per week that are required to fulfill the employment obligation are spent working on research that the student may use for his/her disquisition. Obviously, 20 hours per week is typically not sufficient time to complete one's research program; hence, it is necessary that RAs work additional hours beyond their half-time appointment. *RAs are not automatically granted vacation or leave time.* All absences must be cleared with both the work supervisor(s) and major advisor.

Fellowships

Fellowships and scholarships may be available for students with superior academic records. Students receiving fellowships are subject to the same general rules that apply to research assistants. As an initial guide in finding suitable fellowship opportunities, a list containing information regarding a variety of fellowship opportunities has been compiled by the Graduate School <https://www.ndsu.edu/gradschool/funding>.

Tuition

Tuition (both resident and nonresident) for graduate-level courses is waived for all graduate students with an appointment as a research assistant or a teaching assistant, or for fellowship recipients. However, all graduate students must pay semester fees as assessed by the university. Tuition waivers can be delayed pending completion of required safety training.

Student Expectations

Although students are subject to the degree requirements and examination procedures of their respective interdisciplinary programs, they are still considered members of the Department of Biological Sciences. As such, they are expected to

- Attend departmental seminars
- Participate in departmental functions
- Adhere to general departmental policies as outlined in this manual.

Degree Timelines

As a graduate student in the Department of Biological Sciences, you are required to complete the following tasks during the specified time frames. *Completion of the tasks by the suggested dates will be used as criteria for prioritizing departmental fellowships and TA positions and will be assessed by the annual degree progress report.* Early completion is acceptable and encouraged. Semesters listed are counted as semesters of enrollment. Whether this is fall, spring or summer will depend on your start date. The recommended dates for completion include the following:

M.S. Degree:

Year	Task
1	Form the graduate supervisory committee (end of 1st semester) Hold a first meeting of the graduate committee (end of 2nd semester) Submit a completed plan of study (end of 2nd semester) Submit a research proposal to the graduate committee (end of 2nd or 3 rd semester)
2-3	Hold a second meeting of the graduate committee to assess student progress (end of 5th semester) Submission of thesis, oral defense and graduation (end of 7th semester)

Ph.D. Degree:

Year	Task
1	Form the graduate supervisory committee (end of 1st semester) Hold first meeting of the graduate committee (end of 2nd semester) Submit a completed plan of study (end of 2nd semester)
2-3	Hold annual committee meeting Complete oral and written preliminary exams Submit proposal
4-7	Hold annual committee meetings Submit dissertation Oral defense and graduation

Annual Progress Reports:

All graduate students advised by faculty in the Department of Biological Sciences, regardless of their official degree program, are required to submit annual progress reports (example information collected is shown in Appendix 1). Reports are due on March 1 each year (unless notified otherwise). The data in these reports will be used to

determine whether student expectations (see above) are being met and that adequate progress toward the degree is being made. The report will be electronically submitted through a Qualtrics survey. Students will receive the survey link from the Graduate Student Coordinator at least 2 weeks prior to the due date.

Student Responsibility

The student, in consultation with the major advisor, is responsible for meeting all requirements and deadlines. Students making satisfactory progress generally complete a master's degree in two to three years and a doctorate in five to seven years. In cases where satisfactory progress is questioned, the Graduate Success Committee may either arrange meetings with the student and advisor to establish a schedule for completion of degree requirements or request a written report of the student's progress to be submitted by the student's advisor. Continued deficiency may result in dismissal. In cases where a particular requirement imposes undue hardship on a student, the student's graduate advisory committee may petition the Department, via the Graduate Success Committee, for permission to waive that requirement.

Major Advisor

The faculty member who accepts a graduate student will serve as the major advisor. Generally, the major advisor is active in the field of research specified by the applicant. Selection of an advisor must be mutually satisfactory to the student and the prospective advisor. The advisor-student relationship is unique and perhaps the most important one in the education and training of the graduate student. The mutual respect and stimulation derived from this relationship strengthens and promotes scientific achievement. The advisor should be both the student's severest critic and strongest supporter.

Graduate Supervisory Committee

This policy is set by the Graduate School

M.S. Degree:

The committee shall consist of at least three members for a master's degree. Specific requirements for committee membership can be found here:

<https://bulletin.ndsu.edu/graduate/graduate-school-policies/masters-program-policies/>

Ph.D. Degree:

The committee shall consist of at least four members for a doctoral degree. One of the four members is appointed by the Graduate School, but appointments can be requested by the student and major advisor. The Graduate School appointee must be from outside the department. At least two of the members of the advisory committee must be faculty in the Department of Biological Sciences. Specific requirements for committee membership can be found here:

<https://bulletin.ndsu.edu/graduate/graduate-school-policies/doctoral-degree-policies/>

Plan of Study

The plan of study should be submitted for approval to the advisory committee, the Head of the

Department, the current Graduate Program Coordinator, and the Dean of the Graduate School by the end of the second semester following enrollment for both M.S. and Ph.D. students. The formal plan of study should be completed during the initial meeting of the graduate advisory committee, or shortly thereafter, as a direct outcome of that meeting. The approved plan of study becomes part of the "contract" of the student with the Department and University for completion of his/her graduate program of study. Changes in the plan of study must be approved by the advisory committee, the Department head, the current Graduate Program Coordinator, and the Graduate dean.

The official M.S. and Ph.D. plan of study forms can be found here:
https://www.ndsu.edu/gradschool/current_students/forms/

Coursework

The student, in conjunction with the graduate advisory committee, will design a plan of study appropriate to his/her needs. The student must complete minimum course credit requirements established by the Graduate School for the M.S. and Ph.D. degrees. These requirements are available in the Graduate Bulletin. The student must complete minimum course credit requirements established by the Graduate School and the Department of Biological Science for the M.S. and Ph.D. degrees.

Course requirements

M.S. Degree: Minimum of 30 credit hours total

BIOL 790 – Graduate Seminar (1 semester) - 1 cr
BIOL 884 – Biological Research Principles - 3 cr
BIOL 842 – Quantitative Biology or equivalent as approved by committee - 3 cr
Scientific Integrity or equivalent as approved by committee (BIOL790 with Dr. Greenlee satisfies this requirement and no further credit is needed if you take 790 with her) - 1 cr
BIOL 798 – Master’s Thesis (6-10 cr)

Biological Content Courses to be approved by the advisory committee

From the Graduate Bulletin, “For the Thesis Based Master's, of the required minimum 30 graduate credits, at least 16 credits must be approved for graduate credit numbered from 601-689, 691; 700-789, 791; 800-889 and 891 while the research credits (798) must be not fewer than six nor more than 10 credits. Once these minimum requirements have been met, any other graduate courses can be used to satisfy the remaining Plan of Study requirements.”

<https://bulletin.ndsu.edu/graduate/graduate-school-policies/masters-program-policies/#supervisorycommitteeplanofstudytext>

Ph.D. Degree: Minimum of 90 credit hours total

BIOL 790 – Graduate Seminar (1 semester) - 1 cr
BIOL 884 – Biological Research Principles - 3 cr
BIOL 842 – Quantitative Biology or equivalent as approved by committee - 3 cr
Scientific Integrity or equivalent as approved by committee (BIOL790 with Dr. Greenlee satisfies this requirement and no further credit is needed if you take 790 with her) - 1 cr
BIOL 899 – Doctoral Dissertation

Biological Content Courses to be approved by the advisory committee

From the Graduate Bulletin, "The total credits will be determined by each program but must not be fewer than 90 semester graduate credits, of which no fewer than 27 credits must be in courses approved for graduate credit numbered 601-689, 691; 700-789, 791; 800-889 and 891 (referred to as didactic courses). Of these 27 credits, no fewer than 15 credits must be in 700 or 800-level course work (700-789, 791, 800-889 and 891). A student matriculating with a master's degree, including a degree earned at an international institution, must earn no fewer than 60 graduate credits at NDSU. Of these credits, no fewer than 15 credits must be NDSU courses at the 700 or 800 level (700-789, 791, 800-889, and 891)."

<https://bulletin.ndsu.edu/graduate/graduate-school-policies/doctoral-degree-policies/#planofstudysupervisorycommitteetext>

Language Requirements

A foreign language is not normally a requirement for a graduate degree.

Credit Load

Graduate students on departmental financial support are required to register for a minimum of 5 credits (this pertains to domestic students only as International students are required to enroll in 6 credits.) per semester, except during the summer when 3 credit for the entire summer is required. Formal course work, thesis credits, and dissertation credits count toward these totals. See the academic assistant for details concerning registration for thesis and dissertation credits. International students with a half-time appointment must enroll for 6 graduate credits for full-time status.

<https://bulletin.ndsu.edu/graduate/graduate-school-policies/#supervisorycommitteeplanofstudytext>

Graduate Seminar

Masters and PhD students must enroll in at least 1 semester of graduate seminar. Topics vary each semester, but may include professional development topics or biological content topics. Students are encouraged to suggest relevant topics for this course.

Quality of Work

To remain in graduate school, a student must maintain a minimum cumulative grade point average of 3.0. Seminars, research credit, and special topics courses are not normally included in computing the grade point average. Degree progress will be assessed with the annual progress reports (Appendix 1). If degree progress is determined to be inadequate, the student and advisor will meet with the Department Head to identify a plan of action.

Degree Fulfillment and Leaves of Absence

It is expected that once students begin their graduate program in the Department that they will not leave until all requirements are completed. *Even students who have completed all portions of their plan of study and research except the disquisition must maintain continuous enrollment until degree requirements are completed.*

Students who must interrupt their program may request a leave of absence from the Graduate School which will exempt them from continuous enrollment. A leave of absence must be approved by the major advisor, the Department chair or Program Director, and the Graduate dean. Currently the departmental philosophy discourages leaves of absence; thus, they are rarely granted. Prior to returning to the University, a student on leave must notify the Graduate School, which will restore the student's classification to active status.

Research Program

M.S. Degree

Before the end of the first year after enrollment, students should meet with their advisor and graduate advisory committee to discuss their research program. This discussion may be done at the same meeting where the plan of study is developed. Two weeks prior to the meeting, the student should submit a written preliminary proposal for approval by the advisory committee. This proposal shall be of sufficient detail so that someone not familiar with the project can understand what the project is all about, including why and how it is being conducted. The research program should be planned and the pertinent literature reviewed and understood. Students shall discuss what aspects of the project are original research. Proposals should be double-spaced, using no less than 11 point font and include the following:

- Title and Signature Page
 - Abstract (not more than 1 page)
 - Introduction and Background (literature review)
 - Objectives
 - Methods and Materials
 - Significance of Research Plan
 - Timetable (not more than 1 page)
 - Literature cited
 - Curriculum Vitae
- Appendix sections (as applicable): IACUC, IBC, IRB approval; Recombinant DNA training; Radioisotope training; etc.

Ph.D. Degree

Before the end of the second term after enrollment, students should meet with their advisor and graduate advisory committee to discuss their research program. This discussion may be done at the same meeting where the plan of study is developed. Within the second or third year, two weeks prior to an annual committee meeting, the student should submit a written preliminary proposal for approval by the advisory committee. This proposal shall be of sufficient detail so that someone not familiar with the project can understand what the project is all about, including why and how it is being conducted. The research program should be planned and the pertinent literature reviewed and understood. Students shall discuss which aspects of the project will be original research.

After the committee meeting, the student should submit to the department a final research proposal that incorporates the committee's suggested revisions. Once approved and signed by the student, the advisory committee members, and the Department chair, a copy of the signed proposal shall be submitted to and be maintained by the Department. Students may send a digital PDF to the department's academic

assistant (Wendy Leach). Any significant changes in the direction of research need to be submitted in writing and approved in writing by the advisory committee. Typically, proposals are 15-25 pages in length, double spaced, using no less than an 11 point font and should be structured as a National Science Foundation Doctoral Dissertation Improvement Grant (http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5234).

The following information should also be included:

- Title and Signature Page
- Abstract (not more than 1 page)
- Introduction and Background (literature review)
- Objectives
- Methods and Materials
- Significance of Research Plan
- Timetable (not more than 1 page)
- Budget (not more than 1 page)
- Literature cited
- Curriculum Vitae

Appendix sections (as applicable): IACUC, IBC, IRB approval; Recombinant DNA training; Radioisotope training; etc.

Examinations

A form ([Notification of Scheduled Examination](#)) must be filed with the Graduate School at least two weeks prior to the scheduled date of the examination. This form must be signed by the advisor, Department chair, current Graduate Program coordinator or Program Director, and Graduate dean. The chair, coordinator or director may request to read the disquisition prior to signing the form.

Forms can be found here: http://www.ndsu.edu/gradschool/current_students/forms/

M.S. Degree

The student will give a departmental presentation of his/her research during his/her final semester. A comprehensive final oral examination will also be administered to each master's degree candidate. This examination will be either immediately following the departmental presentation or on a subsequent day. The examining body will consist of the student's advisory committee and any other faculty members; however, advisory committee members are the only voting participants. The examination will test general knowledge in biology, coursework and student's research area. The student passes the exam if no more than one member of the advisory committee votes to fail.

Ph.D. Degree

Preliminary Examination

A comprehensive preliminary examination will be required of each student following the completion of at least 15 credits of didactic coursework (either in residence at NDSU or transferred credits). This examination consists of a written portion followed within one month by an oral portion. Both the written and the oral portions should be successfully completed by the end of the student's second or third year, at which time the student is formally admitted to candidacy for the doctoral degree. The content of the exam will be determined by the graduate committee, incorporating questions that facilitate both

broad-based and in-depth knowledge acquisition. The forms for scheduling the preliminary exam and reporting the results of the exam can be found here: http://www.ndsu.edu/gradschool/current_students/forms/

Written Portion

Typically the exam will focus on topics related to the student's area of study, with the objective of broadening the student's general knowledge of related fields and placing their research within the context of their broader discipline. The format and the time frame of the exam should be decided by the advisory committee. The exam will be prepared and administered by the advisory committee. Committee members who had submitted questions will return their grades to the chair of the advisory committee within two weeks of the examination. Results will be presented on a pass/fail basis. A "pass" is given when a student receives more "passes" than "fails." Students may retake failed sections once within 12 months of the exam. Graduate School policies on comprehensive and oral examinations can be found here: <https://bulletin.ndsu.edu/graduate/graduate-school-policies/doctoral-degree-policies/#dissertationtext>

Oral Portion

Typically the exam will address the research area and the student's coursework, plus any topics from the written section that were not appropriately addressed by the student. Following the exam, the advisory committee will review the student's progress (including such areas as GPA, completion of coursework on the plan of study, research, and seminars). The student passes the oral portion if no more than one member of the advisory committee votes to fail. One of the following recommendations will be communicated to the student, the Department head, and the graduate dean:

1. that the student be admitted to candidacy for the Ph.D. degree;
2. that if the student failed the exam, he/she be allowed to repeat the exam;
- or
3. that the student be terminated from the Graduate Program in Biological Sciences.

Students may appeal unfavorable decisions to the entire Biological Sciences' faculty through the Graduate Affairs Committee. If not successful, the student may then appeal to the Dean of the Graduate School.

Presentation of Research

The candidate will present a public seminar covering the dissertation research during his/her final semester. The seminar must be presented before the final examination can be administered, but does not need to be immediately before the exam.

Final Examination

The final oral examination should be taken sometime in years 4 - 7, after the candidate has completed coursework and the dissertation. This examination will be concerned primarily with the dissertation, but questions may cover material from coursework, especially those courses fundamental to the dissertation. The candidate will be expected to demonstrate a thorough understanding of all aspects of his/her dissertation including literature survey, experimental design and rationale, and significance of the results. The form for reporting the results of the final exam can be found here:

http://www.ndsu.edu/gradschool/current_students/forms/

Disquisitions (Thesis or Dissertation)

A thesis is required for the M.S. degree in the Thesis Option, and a research paper is required for the Comprehensive Study Option. A dissertation and production of a 2 -3 minute video are required for the Ph.D. Consult the NDSU Graduate Bulletin for additional details and requirements for these options and degrees. Please see the Graduate School website for graduation requirements. https://www.ndsu.edu/gradschool/current_students/graduation

Information is available from the Graduate School on how to prepare theses, dissertations, and papers. Students need to adhere to the policies concerning disquisitions as stated in the requirements.

https://www.ndsu.edu/gradschool/current_students/graduation/theses_dissertations_papers

Students will submit copies of their disquisition (thesis or dissertation) in a near final form to the members of their advisory committee at least two weeks before the scheduled date of the oral exam. This deadline should be regarded as a minimum period (one month is preferred), with more time being desirable to allow the committee ample time to evaluate the disquisition.

After approval of the disquisition by the Graduate School, the student must submit electronic copies to the Department and Graduate School.

https://www.ndsu.edu/gradschool/current_students/graduation/theses_dissertations_papers/submission

Students are encouraged to publish the results of research and to give papers at professional meetings. The advisory committee may require the student to have his/her results in a form suitable for publication as well as filing a disquisition. Publication of a disquisition or part(s) of a disquisition should include a statement identifying the work as part of a thesis or dissertation submitted to the Graduate School of North Dakota State University.

Conflict Resolution

I. Purpose: Problems, misunderstandings and frustrations may arise in the workplace. It is the Department of Biological Science's intent to be responsive to its graduate students and their concerns. A graduate student who is confronted with a problem may use this as a guideline for resolving or clarifying concerns.

II. Students should consult the NDSU policy manual (<http://www.ndsu.edu/policy/>), for procedures to resolve conflicts relating to the following:

- A. Graduate College Appeals
- B. Academic misconduct such as breaches of academic integrity in research and publication
- C. Employment specific issues
- D. Cases that arise under the Student Code of Conduct
- E. Cases involving alleged discrimination or sexual harassment

III. Avenues for Informal Conflict Resolution and Complaint Process

The Department of Biological Sciences strongly encourages all students who believe they have a dispute or conflict to use all appropriate avenues for informal resolution before initiating formal grievance procedures. Advice about informal resolutions to situations should be sought first from your faculty supervisor. If the conflict is still unresolved or if the conflict involves your faculty supervisor, contact a member of the department Graduate Affairs

Committee. If the conflict remains unresolved, students can contact the department head or the NDSU ombudsperson (Kristine Paranica). Information about formal grievance procedures can be found here <http://bulletin.ndsu.edu/graduate/graduate-school-policies/graduate-student-appeals/>.

At any time, students are encouraged to seek resolution or advice from the specific resources listed below.

IV. Specific resources

A. NDSU Counseling Center

“The NDSU Counseling Center provides a confidential setting in which students may explore concerns of a personal, academic, or career-related nature; makes referrals; and serves as consultants for faculty and staff. Students in counseling can explore a variety of concerns which may prevent them from functioning at their optimum levels.”

<http://www.ndsu.edu/counseling/>

B. NDSU Family Therapy Center

“The Family Therapy Center (FTC) offers affordable, responsive therapy services to individuals, couples, families, and children in the FM area. Therapists at the FTC are advanced clinical interns from the NDSU Couple and Family Therapy (CFT) Program.” NDSU students receive services for free. <http://www.ndsu.edu/hdfs/ftc/>

C. NDSU Ombudsperson

Kristine Paranica provides consultation, coaching, mediation to faculty and graduate research and teaching assistants. Her expertise include conflict management, mediation skills, emotional and social intelligence, civility, bullying, change management, communication, listening, negotiation, diversity, dealing with difficult people, effective meetings, stress management, leadership, effective supervision, performance management, nonviolent communication, and difficult conversations.

<http://www.ndsu.edu/ombud/services/>

Miscellaneous Information

Purchases

Obtain approval from your advisor or work supervisor before purchasing supplies, materials, and/or equipment with department or grant funds. Be certain that you understand policies, rules, and regulations concerning purchasing. Please do not submit reimbursement requests for less than \$10. Obtain “bill to” and “ship to” addresses from your advisor.

Travel

An interactive web form <https://apps.ndsu.edu/busforms/> must be filled out approximately 10 days in advance for **out-of-state travel**. Fill in the department head’s e-mail address where the form requires the supervisor’s e-mail address. No form is required for in-state travel; however, you should discuss your plans with your advisor or the department chair. Reimbursement for travel expenses must be approved by the graduate advisor or work supervisor. A CSM Travel Expense Reimbursement Request Form must be filled out for reimbursement of travel expenditures

[https://www.ndsu.edu/fileadmin/scimath/CSM Business Center/CSM Travel Expense Reimb Request.pdf](https://www.ndsu.edu/fileadmin/scimath/CSM_Business_Center/CSM_Travel_Expense_Reimb_Request.pdf) Meals are covered under a per diem allowance, assuming funds are available.

Save all itemized non-meal receipts, especially those for lodging.

Other expenses

All receipts must be turned in to the CSM Business Center account technician, Kris Boll, located in Minard 232A6. In the event that you use a personal credit card, be sure that you get an

additional, itemized receipt. Reimbursements cannot be made from the credit card receipt itself.

Postage/Mail

Mail for official business can be left in the department office and postage will be paid by the department. Outgoing mail and campus mail is placed on the counter next to the mailboxes in the main office. Be sure to check your labs snail mailbox at least once a week.

Photocopier

Graduate students have access to the building's photocopier machine. Use is monitored through an access code that is available from your advisor. Your advisor is responsible for all costs incurred to his/her code, so be sure to clear copying with him/her. Copying for personal use is not allowed.

Faxes can be sent through the department copier, using the access code for photocopies. Long distance charges may apply, so advisor approval should be obtained prior to faxing.

Library

The university libraries have collections of books, periodicals, reference materials and maps that are available for student use. Photocopier keys can be checked out at the circulation desk to students on the list. Your advisor is billed for copies made. The library also has invested in a number of online journals. Journal articles not accessible can be requested through interlibrary loan <http://library.ndsu.edu/borrow-other-libraries-ill/>.

Security/Keys

Keys and card access are obtained from Wendy Leach in the Department office. All students will need keys to their assigned office and their lab. In addition, students need card access to the outside door. Additional access requires authorization by the individuals responsible for that area.

Biological Sciences key control policies

- Student's accept financial responsibility for their keys and will be charged a fee of \$10 per key to replace lost or unreturned keys.
- If keys are not returned, a hold will be placed on the student's transcripts until keys are returned or payment is received for lost keys.
- New key(s) are picked up in Stevens 201 from Wendy Leach.
- When the student is finished at NDSU, they must return their keys to Wendy Leach. At that time, their deposit will be returned, if one was paid.

All graduate students have the responsibility of maintaining proper security measures. Be particularly security conscious of areas containing valuable equipment or dangerous materials. Any theft or vandalism should be reported immediately to the major advisor, Department chair, or campus police.

Computers/E-mail

Computers are available for student use at any of a number of clusters on campus. Check the Information Technology Services (ITS) web site <http://www.ndsu.edu/its/> for details about the computing services available at NDSU. To request an e-mail account, follow the instructions outlined at

http://www.ndsu.edu/its/help_desk/account_hub/new_students_activate_your_ndsu_it_services/

Multimedia equipment can also be reserved (online reservations) from ITS. In addition to the NDSU clusters, computers are usually made available by departmental faculty for students working in their laboratories.

Safety

All graduate students are expected to adhere to campus rules and regulations concerning safety. Attendance at required safety and risk management seminars and presentations is mandatory. If you have any questions concerning safety or NDSU's policies on safety, consult with your major advisor or the Department chair.

In the event of a fire or fire drill, go to your designated assembly point. For Stevens Hall residents, our predetermined designated assembly point is across the street (Bolley Drive) on the east side of Stevens Hall. Each person is required to exit immediately; you must be at least 50 feet from the building. Close all lab doors as you depart.

Training/Certification

Baseline Safety; Laboratory Safety Course Modules 1, 3-6 with Module 2 initial in-person Waste Handling and thereafter an online refresher at the start of each semester; Sexual Harassment/Title IX training are mandatory for all students. IACUC (Institutional Animal Care and Use Care), IBC (Institutional Biosafety Committee), IRB (Institutional Review Board), Occupational Health and Safety (OHS), or other types of training may be required depending on your lab.

Student Health Services/Insurance

Clinical services are available to registered students at Wellness Center on campus. A NDSU health insurance plan is available to students, their spouses, and their children. Application forms are available at the Wellness Center. For more information see <http://www.ndsu.edu/studenthealthservice/>.

Vehicles

Vehicles are available from NDSU motor pool for NDSU-related business <http://www.ndsu.edu/facilities/facilitiesoperations/motorpool/>. Individuals are expected to be in compliance with all laws governing operation of motor vehicles. Vehicles are for official use only. Only persons officially working for NDSU or current students may be transported. Drivers must have a valid state driver's license to operate university, state, or federal vehicles.

Treat the vehicles with care and report problems to your advisor and to the Facilities Management. Each vehicle must be equipped with a first-aid kit, flashlight, fire extinguisher, spare tire, and jack. During winter use, the vehicle must be equipped with a winter survival kit. The driver is responsible for checking that these items are present. During travel, the driver and all passengers are required to use seat belts. Lock vehicles when not in use. Prior to departing, drivers must apply for a fueling card (see Wendy Leach for assistance). Whenever possible, use the ND Department of Transportation fueling sites. Drivers are responsible for the security of credit cards and should report any losses immediately.

Accidents or damages to a vehicle must be reported immediately to a law enforcement officer, to Facilities Management, and to your major advisor. Do not accept responsibility for an accident; provide only factual information. It is unlawful to consume alcoholic beverages while in control of a vehicle or to drive under the influence of alcohol and certain other substances. It is

also illegal to transport or possess alcoholic beverages and/or illegal drugs in a university, state, or federal vehicle. Individuals may be personally liable if they have an accident as the result of a violation of the rules.

When you return from a trip, fill the tank with gas. Remove personal items and trash and wash as necessary. An outdoor vacuum is available at Facilities Management for cleaning vehicles. Record mileage, return vehicle to the designated lot, and return keys and packets to Facilities Management.

Boats, canoes, and other watercraft

All laws governing use of watercraft must be obeyed. Personal floatation devices (life jackets) must be worn at all times while on the water.

Child Care

Child care is available on campus at the Wellness Center. For information, see <http://www.ndsu.edu/wellness/childcare/>.

Graduate Student Housing - One-, two- or three-bedroom apartments are available to graduate students in Apartment 1701, Bison Court, Niskanen, or University Village. For information, contact Residence Life <http://www.ndsu.edu/reslife/>.

Credit Union - Graduate Students may join the campus credit union (Northland Educators Federal Credit Union).

Award	Dates:			Amount	Description	Where to apply
	Deadline for app	Announce				
Kath	1-Mar	15-Mar		750	The Sheila <u>Kath</u> award is available to Biological Sciences graduate students who demonstrate strong motivation, work ethic, and financial need.	https://ndsu.academicworks.com/opportunities/23247
LaVoy	1-Mar	15-Mar		300	The Oliver LaVoy award is available to Biological Sciences graduate students, with preference given to students with a demonstrated commitment to stewardship of forests and trees.	https://ndsu.academicworks.com/opportunities/24701
Linz	1-Mar	15-Mar		550	The Linz Family Endowed Ornithology award is available to PhD students in Biological Sciences, with preference given to support research in the area of ornithology.	https://ndsu.academicworks.com/opportunities/25277
Nelson	1-Mar	15-Mar		1350	The Harvey K. Nelson award is available to Biological Sciences graduate students, with preference given to those whose research is focused on wetlands, waterbirds, and waterfowl.	https://ndsu.academicworks.com/opportunities/25407
Schmoll	1-Mar	15-Mar		450	The Suzy Schmoll award is available to Biological Sciences graduate students with a GPA of 3.5 or higher, with a preference given to lawful permanent residents (new Americans) or international students.	https://ndsu.academicworks.com/opportunities/25401
Cross Ranch	19-Mar	15-Apr		2400	The <u>Cross Ranch</u> fellowship is for first or second year graduate student studying a botany-related subject and earning a degree in Biology, Range Management, or Natural Resources Management	Department Blackboard page: \Graduate Program\Graduate scholarships/fellowships \Cross Ranch fellowship 2023
Shockey Scoby Summer fellowship	19-Mar	15-Apr		3000	The <u>Shockey-Scoby</u> Graduate Award (Summer) is for outstanding new and incoming students whose research will have an ecological or conservation focus.	Department Blackboard page: (\Graduate Program\Graduate scholarships/fellowships \Shockey Scoby Summer fellowship 2023
SS travelMay-June	19-Mar	15-Apr		500	The Shockey-Scoby Distinguished Student Travel Award is a professional development award to be granted to outstanding graduate students. Specifically, this award will be granted to students who have an <u>ecological or conservation focus</u> (interpreted broadly). This award is intended to support the travel of exemplary students to national and international meetings where they are expected to present (poster or talk) results of their graduate research	Department Blackboard page: (\Graduate Program\Graduate scholarships/fellowships \Shockey Scoby spring travel 2023
SS travelJuly-Sept	1-May	15-May		500	The Shockey-Scoby Distinguished Student Travel Award is a professional development award to be granted to outstanding graduate students. Specifically, this award will be granted to students who have an <u>ecological or conservation focus</u> (interpreted broadly). This award is intended to support the travel of exemplary students to national and international meetings where they are expected to present (poster or talk) results of their graduate research	Department Blackboard page: (\Graduate Program\Graduate scholarships/fellowships \Shockey Scoby summer travel 2023

Graduate Faculty and Research Interests

Laura Aldrich-Wolfe, Ph.D., Cornell University, 2006

Associate Professor

Community ecology, mycorrhizas, plant-fungal interactions. The roles of mycorrhizas in natural and managed ecosystems. Drivers and functions of community composition in the rhizosphere. Maintenance and restoration of diversity in tropical forests and temperate grasslands.

Julia H. Bowsher, Ph.D., Duke University, 2007

Associate Professor and Chair

Evolutionary Developmental Biology. The mechanisms by which development shapes evolutionary outcomes, specifically in insects. Parallel evolution and the comparison of the molecular basis of similar structures in different lineages. The evolution of novel structures.

Ned Dochtermann, Ph.D., University of Nevada, Reno, 2009

Associate Professor

Behavioral and Evolutionary Ecology. Ecological and evolutionary maintenance and consequences of phenotypic variation, in particular behavioral variation and behavioral correlations. Research examines, for example, how variation impacts evolutionary outcomes available to populations and how variation influences population dynamics.

Erin H. Gillam, Ph.D., University of Tennessee, 2007

Professor

Behavioral Ecology of Mammals, with a focus on bats. Understanding how ecological, evolutionary, and behavioral factors influence the structure of acoustic communication signals. Behavioral context and function of social calls in a variety of species. Ecology of bats and other mammals in the Great Plains.

Kendra J. Greenlee, Ph.D., Arizona State University, 2004

Professor

Insect Physiology and Immunology. Research interests include body size variation and respiratory system physiology in insects, with an emphasis on effects of hypoxia on respiratory functions and molting. Insect immunity and the response to bacterial and parasite infections.

Tim Greives, Ph.D., Indiana University, 2009

Associate Professor

Physiological Ecology, Seasonality, Biological Rhythms. Physiological and evolutionary mechanisms regulating life-history transitions in seasonal environments. Trade-offs between physiological systems, particularly between energetic investment into reproduction and immune function (as a proxy for survival). Identification of selective forces acting to favor precise timing mechanisms, and fitness value of functional endogenous clocks.

Britt Heidinger, Ph.D., Indiana University, 2007

Associate Professor

Physiological Ecology, Aging, Stress Responsiveness. Current research focuses on physiological mechanisms of aging (stress responsiveness and telomere dynamics), and the influence of exposure to environmental stressors on aging.

Jiha Kim, Ph.D., University of Georgia, 2006

Assistant Professor

Cancer Biology Understanding cross communications between cancer cells and tumor microenvironment with an emphasis on vascular and immune components. Current research is focused on identifying a mechanism to reprogram the perivascular signature to promote vascular functionality and enhance drug delivery efficacy.

Jennifer L. Momsen, Ph.D., Rutgers University, 2007

Professor

Biology Education. Effective pedagogy for and challenges to undergraduate learning of complex biological systems; infusing introductory biology curriculum with quantitative biology; barriers and effective approaches to instructional change in undergraduate biology.

Lisa M. Montplaisir, Ph.D., University of Arizona, 2003

Professor

Biology Education, Especially in Post-secondary Science Classrooms. Research focus is on student learning and understanding in undergraduate science classrooms. Other interests are knowledge retention and curriculum development at the undergraduate level and teacher retention/recruitment and curriculum development at the secondary level.

Marinus L. Otte, Ph.D., Vrije Universiteit of Amsterdam, 1991

Professor

Wetland Ecology, Biogeochemistry, Ecophysiology, and Ecotoxicology. Responses of wetland plants to changes in their environment. 'Extreme' wetlands. Elemental uptake by wetland plants associated with hot springs. Metal tolerance in wetland plants. Natural and constructed wetlands for improvement of water quality. Wetlands for phytoremediation and phytostabilization of mine wastes.

Katie M. Reindl, Ph.D., North Dakota State University, 2006

Professor

Cancer Pharmacology. Mechanisms of action of anticancer agents and pharmacological targets for cancer treatment.

Sarah A. Signor, Ph.D., University of California, Davis, 2013

Assistant Professor

Insect Evolutionary Genomics. Addresses fundamental questions in evolutionary biology using *Drosophila* as a model organism. Integrates diverse methods to understand how gene expression evolves within a network context, how gene expression is shaped by heterogeneous environments, and how organisms evolve in response to increasingly human modified landscapes

Mathew T. Smith, Ph.D., University of Arkansas, 2012

Associate Professor of Practice

Physiological Ecology and Ecomorphology of Reptiles and Amphibians. Patterns of phenotypic variation in natural populations, how such patterns can be used to infer the evolutionary history of the organisms, and inform management decisions based on this knowledge; understanding adaptations that permit organisms to subsist within a constantly changing environment.

Craig A. Stockwell, Ph.D., University of Nevada, Reno, 1995

Professor

Evolutionary Ecology of Native and Rare Fishes. Contemporary evolution of populations in response to novel environments (salinity & parasite communities). Establishment of new

populations and the implications for host-parasite associations. Conservation biology, invasion biology, and molecular ecology.

Steven E. Travers, Ph.D., University of California, Santa Barbara, 1998

Associate Professor

Plant Evolutionary Ecology. Focuses on understanding the ecology and evolution of natural plant populations. In particular, interested in the evolution of plant reproductive traits, the role of local adaptation and the ecological genomics and population genetics of plant responses to environmental change.

Important Telephone Numbers

Emergency **911**
FAX 1-7149

Campus Police (non-emergency)	1-8998
Jeff Kittilson (Research Specialist)	1-7954
James Fornes (Academic Assistant)	1-7087
Kristine Paranica (Ombudsperson)	1-5114
Julia Bowsher (Professor and Department Chair)	1-5921

Lab Coordinators

Kimberly Booth (Assistant Professor of Practice)	1-7223
Angie Hodgson (Professor of Practice)	1-6561
Mary Jo Kenyon (Senior Lecturer, Human A&P)	1-6156
Matthew Smith (Associate Professor of Practice)	Email only
Dawn Ihle (Hill Lab Coordinator)	1-7398

College of Science & Math Business Office

Dawn Halle (Business Coordinator)	1-5763
Deb McDonough (Account Tech)	1-8607

Annual Report of Degree Progress for Academic Year 2022 – 2023

STUDENT INFORMATION

Name:

Advisor(s):

Graduate program: *for example, PhD in Biological Sciences*

Start date of current graduate program:

Is this the same program you initially started at NDSU?

If not, what program did you begin in, and when did you begin that program?

In the previous calendar year, list the number of semesters on TA: on RA:

In the previous calendar year, did you take on a TA overload?

If so, how many semesters and how many extra sections?

Are you participating in the College Teaching Certification program?

If so, how and when do you expect to complete the teaching requirement for this program?

Graduate GPA:

DEGREE PROGRESS

Supervisory committee members:

Date of most recent annual committee meeting:

Date (tentative) of next committee meeting:

Is your Plan of Study submitted and approved? *Yes or No. If no, please indicate when you expect to submit that paperwork.*

Total number of credit hours completed since start date:

Didactic credits completed:

Thesis credits completed:

Preliminary exams (PhD students only)

Date of Written Exam: *completed or scheduled?*

Date of Oral Exam: *completed or scheduled?*

Research Proposal

Date of completion or date scheduled:

Has your research proposal been approved by the department head?

Is your research proposal on file with the department?

Research progress

Replace this text with a short narrative of the research progress you have made over the past year and indicate your research goals for the coming year.

Thesis/Dissertation

Replace this text with a short narrative of the progress towards completing your thesis or dissertation (e.g., how many chapters are completed) and a target date for when you will defend.

PROFESSIONAL DEVELOPMENT

Training

Please provide the date of most recent training for each of the following, as applicable:

- Title IX: *info available online: https://www.ndsu.edu/hr/training/annual_training/*
- Baseline safety: *info available online: https://www.ndsu.edu/hr/training/annual_training/*
- IACUC: *info available online: https://www.ndsu.edu/research/integrity_compliance/iacuc/training/*
- IRB: *info available online: https://www.ndsu.edu/research/integrity_compliance/irb/training/*
- IBC: *info available online: https://www.ndsu.edu/research/integrity_compliance/ibc/training/*

Peer-reviewed Manuscripts

- *Replace this text with a list of all manuscripts in press, in review, or published since your last report.*

Grant applications

- *Include a list of all grant applications you submitted since your last report. Include the title, funding source, status (pending, declined or funded), and amount. You may also include grants on which you were not PI, but may have written a component.*

Abstracts/presentations (please indicate whether local, regional, state, national or international)

- *Include a list of all presentations since your last report.*

Courses taught as instructor or TA

- *List courses you were involved in for summer, fall, and current semester*

Innovative teaching activity (example)

- *Short narrative of how you have improved your teaching*

Professional development training

- *List any professional development workshops or seminars or courses you have taken (i.e., Teaching college science certificate, writing workshops or grant writing workshops)*

Outreach activities

- *List any outreach activities you participated in this past year (e.g., Darwin Day)*

Honors or Awards

- *List any awards or honors you received or were nominated for this past year.*

The graduate affairs committee and your faculty advisor, <Insert Name> will evaluate this report. We will send a memo detailing our evaluation of your progress.