The Zoology Graduate Program provides training in the following broad subject areas: cellular and molecular biology, developmental biology, neuroscience, physiology, ecology, evolution, and animal behavior. There is great flexibility in our graduate program to serve the diverse scholarly interests and cultures in the Department of Integrative Biology. Each student’s course of study is tailored to his or her individual interests, career goals, and needs, and we admit students with diverse academic backgrounds. The path taken by a student results from a deliberative process that involves discussions between the student and the student’s advisor and advisory committee.

The Department of Integrative Biology faculty strongly believes that graduate education should be distinguished from undergraduate education in recognition of individuality and emphasis on responsibility in graduate students. This philosophy requires flexibility and is not well served by the imposition of many formal requirements to be met by all students. Rather, more emphasis is placed on the role of advisory committees in devising programs of breadth and depth appropriate for individual students with due regard to areas outside of biology which are important for the student’s effectiveness in their chosen field.

**JOINT DEGREE**

Doctoral students may elect a joint degree (two programs) which combines zoology with another biological program. The requirements for such candidates will be determined by the certification committee (which includes members of both programs) in accordance with regulations established by the Graduate School.

**FACILITIES**

Facilities and staff are available for advanced study in a wide variety of biological fields including aquatic and terrestrial ecology, conservation biology, cell/molecular/developmental and neurobiology, endocrinology, ethology, genetics, evolution and systematics, comparative physiology, and physiological ecology.

In addition to a broad range of well-equipped laboratories, research facilities include advanced microscopy facilities (http://www.microscopy.wisc.edu/), limnological laboratories on campus (Lake Mendota) and in northern Wisconsin (Trout Lake), the University Arboretum, the Zoological Museum, and a Molecular Systematics Laboratory.

**ADMISSIONS**

Please consult the table below for key information about this degree program’s admissions requirements. The program may have more detailed admissions requirements, which can be found below the table or on the program’s website. Graduate admissions is a two-step process between academic programs and the Graduate School. **Applicants must meet** the minimum requirements (https://grad.wisc.edu/apply/requirements/) of the Graduate School as well as the program(s).

Once you have researched the graduate program(s) you are interested in, apply online (https://grad.wisc.edu/apply/).

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Deadline</td>
<td>December 1</td>
</tr>
<tr>
<td>Spring Deadline</td>
<td>September 1</td>
</tr>
</tbody>
</table>

**FUNDING**

Resources to help you afford graduate study might include assistantships, fellowships, traineeships, and financial aid. Further funding information (https://grad.wisc.edu/funding/) is available from the Graduate School. Be sure to check with your program for individual policies and restrictions related to funding.

**GRADUATE SCHOOL RESOURCES**

Financial support is available to qualified graduate students in the form of teaching assistantships, research assistantships, and fellowships.

Graduate students who have a teaching or research assistantship of at least a 33.3% appointment (approximately 13.3 hours per week) during the fall or spring semester are eligible to receive remission of full tuition. Fellowships that are payrolled through the university and that carry stipends equivalent to at least a 33.3% research assistantship also qualify for remission of non-resident tuition. Tuition remission is conditionally awarded at the start of the semester based on the
expectation that actual earnings during the semester will be at least 33.3% of the full-time rate.

All students pay segregated fees. The only exception is that fellowships paid through the Graduate School have segregated fees waived in addition to tuition. Segregated fees are approximately $630/semester and are used for campus overhead to help pay for the exercise facilities, student unions, student organization funding, etc.

Assistantships and fellowships also provide eligibility for an excellent health insurance program, an extremely valuable benefit that provides single or family coverage that is more comprehensive than individuals can usually purchase on their own. Additionally, assistantships and fellowships provide a stipend for living expenses.

TEACHING ASSISTANTSHIPS
The most common source of support is a teaching assistantship. To receive a teaching assistantship, candidates for admission must meet the following requirements:

• evidence (usually from the undergraduate transcript) of an appropriate background in the relevant subject matter of the course(s) to which appointment is being considered;
• evidence (usually from letters of recommendation or verbal communication) of the candidate's potential as a teaching assistant;
• an undergraduate GPA of 3.0 or above (on a 4.0 scale); and
• for students whose native language is not English, evidence of competence in spoken English through the SPEAK test that is administered by UW–Madison. International applicants should note that a TA appointment is not normally possible during the first year of graduate study.

Current students who apply for their first teaching assistantship are also subject to the above criteria, as well as their performance as a graduate student. Reappointment as a teaching assistant depends upon satisfactory progress as a graduate student, satisfactory performance as a teaching assistant, and completing the Equity/Diversity TA Training.

Teaching assistants may be eligible for UW–Madison teaching awards (https://grad.wisc.edu/taawards/), including the Early Excellence in Teaching Award, Exceptional Service Award, Innovation in Teaching Award, Capstone Ph.D. Teaching Award, and the College of Letters & Science Teaching Fellow Award.

RESEARCH ASSISTANTSHIPS
Research assistantships are made possible by grants awarded to faculty for particular research programs. Recipients are selected by the individual professor concerned, and the student's interests and experience must match the needs of the funding project. Availability of research assistantships varies.

ADVANCED OPPORTUNITY FELLOWSHIPS
Advanced Opportunity Fellowships (AOF) are granted to the UW–Madison Graduate School by the State of Wisconsin and are combined with other graduate education funds to support the recruitment and retention of highly qualified underrepresented students in UW–Madison graduate programs. Fellowships are competitive and merit-based. AOF funding is intended to increase the racial and ethnic diversity of the graduate student population, as well as to support economically disadvantaged and first generation college students. AOF fellowships are paid through the Graduate School by the College of Letters & Science's Community

EXTERAL FELLOWSHIPS
Fellowships from professional societies and outside agencies provide another important source of aid for which students may apply either before or after commencing graduate work at UW–Madison. If necessary, external fellowships can often be supplemented with university funds up to prevailing university fellowship rates.

All qualified students who are US citizens or permanent residents are urged to apply to the National Science Foundation (NSF) Graduate Research Fellowship Program (GRFP). Students apply directly to NSF; the closing date is usually in early November. Please check the NSF (http://www.nsf.gov/) website for the application instructions and deadline.

REQUIREMENTS

MINIMUM GRADUATE SCHOOL REQUIREMENTS
Review the Graduate School minimum academic progress and degree requirements (http://guide.wisc.edu/graduate/#policiesandrequirementstext), in addition to the program requirements listed below.

MAJOR REQUIREMENTS

MODE OF INSTRUCTION

<table>
<thead>
<tr>
<th>Mode of Instruction</th>
<th>Face to Face</th>
<th>Evening/Weekend</th>
<th>Online</th>
<th>Hybrid</th>
<th>Accelerated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Mode of Instruction Definitions

Accelerated: Accelerated programs are offered at a fast pace that condenses the time to completion. Students are able to complete a program with minimal disruptions to careers and other commitments.

Evening/Weekend: Courses meet on the UW–Madison campus only in evenings and/or on weekends to accommodate typical business schedules. Students have the advantages of face-to-face courses with the flexibility to keep work and other life commitments.

Face-to-Face: Courses typically meet during weekdays on the UW-Madison Campus.

Hybrid: These programs combine face-to-face and online learning formats. Contact the program for more specific information.

Online: These programs are offered 100% online. Some programs may require an on-campus orientation or residency experience, but the courses will be facilitated in an online format.

CURRICULAR REQUIREMENTS

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>51</td>
</tr>
<tr>
<td>Residence</td>
<td>32</td>
</tr>
</tbody>
</table>
Every graduate student is required to have an advisor and a committee. To ensure that students are making satisfactory progress toward a degree, every student is required to meet with the advisor and committee annually to review progress. If a progress report has not been filed by April 1, a hold will be placed on student course registration.

CREDITS PER TERM ALLOWED
15 credits

TIME CONSTRAINTS
It is expected that a Ph.D. student will defend the dissertation by the end of the fifth academic year. If this is not accomplished by the end of the summer following the sixth academic year, the student’s mentor must present a written statement to the Director of Graduate Studies that
explains why the Ph.D. has not been completed and describes plans that the student and the student's advisory committee have agreed upon to ensure completion, including specific expectations, dates for completion, and consequences should expectations not be met. Continuation in the program beyond eight years will be at the discretion of the mentor and advisory committee. Ten years is the outside limit by which a student must complete the Ph.D. degree.

It is up to the student's committee to determine whether or not a student who has been absent for five or more consecutive years will lose the credit earned before the absence; that coursework may not count toward Graduate School credit requirements.

**GRIEVANCES AND APPEALS**

These resources may be helpful in addressing your concerns:

- Bias or Hate Reporting (https://doso.students.wisc.edu/bias-or-hate-reporting/)
- Graduate Assistantship Policies and Procedures (https://hr.wisc.edu/policies/gapp/#grievance-procedure)
- Hostile and Intimidating Behavior Policies and Procedures (https://hr.wisc.edu/hib/)
  - Office of the Provost for Faculty and Staff Affairs (https://facstaff.provost.wisc.edu/)
  - Dean of Students Office (https://doso.students.wisc.edu/) (for all students to seek grievance assistance and support)
- Employee Assistance (http://www.eao.wisc.edu/) (for personal counseling and workplace consultation around communication and conflict involving graduate assistants and other employees, post-doctoral students, faculty and staff)
- Employee Disability Resource Office (https://employeedisabilities.wisc.edu/) (for qualified employees or applicants with disabilities to have equal employment opportunities)
- Graduate School (https://grad.wisc.edu/) (for informal advice at any level of review and for official appeals of program/departamental or school/college grievance decisions)
- Office of Compliance (https://compliance.wisc.edu/) (for class harassment and discrimination, including sexual harassment and sexual violence)
- Office of Student Conduct and Community Standards (https://conduct.students.wisc.edu/) (for conflicts involving students)
- Ombuds Office for Faculty and Staff (http://www.ombuds.wisc.edu/) (for employed graduate students and post-docs, as well as faculty and staff)
- Title IX (https://compliance.wisc.edu/titleix/) (for concerns about discrimination)

Students should contact the department chair or program director with questions about grievances.

**OTHER**

There is great flexibility in our graduate program to serve the diverse scholarly interests and cultures in the Department of Integrative Biology. The path taken by a student results from a deliberative process that involves discussions between the student and the student's advisor and advisory committee. The department's policy is to only accept students that can be financially supported by teaching assistantships, research assistantships, and/or fellowships.

### LEARNING OUTCOMES

1. Demonstrate academic mastery in at least one of the broad subject areas represented in the Department of Integrative Biology.
2. Demonstrate a broad understanding of major current and past theories, research findings, and methodologies and techniques in their area of concentration both orally and in writing.
3. Develop critical thinking skills. They will retrieve and examine scientific literature, evaluate evidence for and against hypotheses, identify knowledge gaps, strengths and weaknesses in existing literature, synthesize knowledge, and develop conclusions.
4. Develop and complete original research that advances a specific field of study within one of the broad subject areas represented in the Department of Integrative Biology.
5. Retrieve, evaluate, and interpret professional scientific literature and use this information to develop theoretical frameworks, testable hypotheses, and predictions for their own research projects.
6. Design realistic and feasible research projects and prepare necessary protocols.
7. Conduct independent research and analyze and interpret resulting data.
8. Prepare and submit manuscripts resulting from their independent research for publication in professional, peer-reviewed journals.
9. Effectively communicate to diverse audiences in writing, through oral presentations, and discussions.
10. Write clear and concise research articles for publication in professional, peer-reviewed journals.
11. Present at scientific conferences and/or in formal and informal seminars.
12. Learn methods of communication needed to interact with professional colleagues and to request grant support.
13. Present research articulately and informatively to diverse audiences.
14. Give and receive feedback orally and in writing.
15. Have with opportunities to engage in public outreach and education.
16. Effectively teach topics or research methods in cellular and molecular biology; developmental biology; neuroscience; physiology; ecology; evolution; or animal behavior.

17. Receive training and serve as teaching assistants for at least one semester.

18. Have with opportunities to mentor others in a laboratory or research setting.

19. Have an understanding of professional and ethical responsibility.

20. Trained to use scientific rigor when designing experiments, collecting and analyzing data, interpreting and reporting results.

21. Trained in the ethics of publishing.

22. Know and adhere to laws, regulations, needed permits and licenses, occupational health and safety standards.

23. Provided with diverse training that will prepare them for a range of flexible and sustainable careers (e.g., academia, industry, government, science policy and administration, science commerce, science writing, law, and science education and outreach at all levels).

24. Develop broadly applicable skills in critical thinking and problem solving.

25. Have opportunities to develop skills in leadership, project management, teamwork, and communication and to develop collaborations with nonacademic partners.

PEOPLE

FACULTY
Professors Hardin (chair, jdhardin@wisc.edu), Bement, Blair, Damschen, Gammie, Halloran, Ives, Lee, Newmark, Orrock, Riters, Stanley, Turner, and Vander Zanden

Associate Professors Amann and Grinblat

Assistant Professors Dugan and Sharma

AFFILIATED FACULTY
Professors Auger, Currie, Fernandez, Gratton, Hawks, Karasov, Lindroth, Marler, Payseur, and Strier

Associate Professors Hittinger and Pool

Assistant Professors McFarland and Schoville