

# INTEGRATIVE BIOLOGY, M.S.

The Integrative Biology 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.

The faculty, students and staff in the Integrative Biology Graduate Program are committed to supporting a diverse, equitable, and inclusive workplace. We believe that each person's identity, background, ethnicity, race, sexual orientation, beliefs, and other experiences fuel the creativity and innovation that are central to scientific discovery. In our program we also require a diversity statement in your application.

## 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/>).

| Requirements    | Detail      |
|-----------------|-------------|
| Fall Deadline   | December 1  |
| Spring Deadline | September 1 |

|                                    |  |
|------------------------------------|--|
| Summer Deadline                    | The program does not admit in the summer.  |
| GRE (Graduate Record Examinations) | Not required.  |
| English Proficiency Test           | Every applicant whose native language is not English or whose undergraduate instruction was not in English must provide an English proficiency test score and meet the Graduate School minimum requirements ( <a href="https://grad.wisc.edu/apply/requirements/#english-proficiency">https://grad.wisc.edu/apply/requirements/#english-proficiency</a> ). |
| Other Test(s) (e.g., GMAT, MCAT)   | n/a  |
| Letters of Recommendation Required | 3  |

Given the broad nature of the program, there are no strict prerequisites for admission. Interested applicants should identify and contact potential faculty advisors. Admission to the graduate program is contingent upon being accepted by an individual faculty advisor. Applicants should contact potential faculty advisors by email early in the application process to discuss mutual interests and to determine if the faculty member is actively recruiting graduate students. For a list of all faculty members and their research interests, please see People (<https://integrativebiology.wisc.edu/people/>) on the department website.

In addition to the Graduate School application, all applicants must electronically submit at least three letters of recommendation, a diversity statement, a personal statement including areas of research interest and the names of prospective faculty advisors, a CV/resume, and unofficial transcripts from all undergraduate and graduate schools attended (official transcripts will be requested upon admission to the program). For more specific instructions regarding application requirements, please see Prospective Students (<https://integrativebiology.wisc.edu/graduate-program/prospective-students/>) on the department website. The annual admission application deadline is December 1. Most admission decisions will be made, and applicants will be notified, by the end of March.

## FUNDING

## REQUIREMENTS

### MINIMUM GRADUATE SCHOOL REQUIREMENTS

Review the Graduate School minimum academic progress and degree requirements (<http://guide.wisc.edu/graduate/#policiesandrequirements>), in addition to the program requirements listed below.

### MAJOR REQUIREMENTS

#### MODE OF INSTRUCTION

| Face to Face | Evening/Weekend | Online | Hybrid | Accelerated |
|--------------|-----------------|--------|--------|-------------|
| Yes          | No              | No     | No     | No          |

## 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

### Requirements Detail

Minimum  
Credit  
Requirement

30 credits

Minimum  
Residence  
Credit  
Requirement

16 credits

Minimum  
Graduate  
Coursework  
Requirement

Half of degree coursework (15 credits out of 30 total credits) must be completed graduate-level coursework; courses with the Graduate Level Coursework attribute are identified and searchable in the university's Course Guide (<https://registrar.wisc.edu/course-guide> (<https://registrar.wisc.edu/course-guide/>)).

Overall  
Graduate GPA  
Requirement

3.00 GPA required.

Other Grade  
Requirements

An average record of B or better in all work taken as a graduate student is required by the Department of Integrative Biology (grades of P and S are for this purpose considered to be satisfactory at the B level; grades of Incomplete are considered for this purpose to be unsatisfactory if they are not removed during the following semester of residence).

Assessments  
and  
Examinations

In the second semester of the first year, students must complete the Certification of Candidate for a Master's Degree.

Typically the defense of the master's degree occurs no later than the end of the student's sixth semester. A master's degree warrant must be requested from the department prior to the defense.

Language  
Requirements

To be determined by the advisory committee.

## REQUIRED COURSES

In addition to completing a research project, M.S. students must take courses and seminars to fulfill required research credits. Specific Zoology courses (<http://guide.wisc.edu/courses/zoology/>) are approved by the student's advisor or advisory committee and depend on the student's research area, interests, and goals. In keeping with the diverse areas of research and training for students in Zoology, students may additionally

take any courses outside of Zoology that have been identified as graduate-level to meet this requirement.

## POLICIES

### GRADUATE SCHOOL POLICIES

The Graduate School's Academic Policies and Procedures (<https://grad.wisc.edu/acadpolicy/>) provide essential information regarding general university policies. Program authority to set degree policies beyond the minimum required by the Graduate School lies with the degree program faculty. Policies set by the academic degree program can be found below.

### MAJOR-SPECIFIC POLICIES

#### PRIOR COURSEWORK

##### Graduate Work from Other Institutions

With committee approval, students are allowed to count no more than 14 credits of graduate coursework from other institutions. Coursework earned five or more years prior to admission to a master's degree is not allowed to satisfy requirements. Typically committees will choose to cap coursework from another institution at a lower level than 14 credits, but this is a committee decision to be made on a case-by-case basis.

##### UW–Madison Undergraduate

With committee approval, students are allowed up to 7 credits numbered 300 or above from their UW–Madison undergraduate career to fulfill graduate requirements. Typically committees will choose to cap coursework allowed from undergraduate careers at a lower level than the 7 allowed, but this is a committee decision to be made on a case-by-case basis.

##### UW–Madison University Special

With committee approval, students are allowed to count no more than 15 credits of coursework numbered 300 or above taken as a UW–Madison Special student. Coursework earned five or more years prior to admission to a master's degree is not allowed to satisfy requirements. Typically committee members will choose to cap the number of coursework taken as a University Special student at a lower level, but this is a committee decision to be made on a case-by-case basis.

#### PROBATION

The Graduate School regularly reviews the record of any student who earned grades of BC, C, D, F, or Incomplete in a graduate course (300 or above), or grade of U in research credits. This review could result in academic probation with a hold on future enrollment or in being suspended from the Graduate School.

#### ADVISOR / COMMITTEE

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 master's student will complete the thesis or research report by the end of the third academic year. If this is not

accomplished by the end of the summer following the third academic year, the major professor must present a written statement to the Director of Graduate Studies that explains why the master's degree 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 four years will be at the discretion of the mentor and advisory committee. Five years is the outside limit by which a student must complete the master's 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 credits 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://employee disabilities.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/departmental 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. They may also contact the L&S Academic Divisional Associate Deans, the L&S Associate Dean for Teaching and Learning Administration, or the L&S Director of Human Resources.

## 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.

## PROFESSIONAL DEVELOPMENT

### GRADUATE SCHOOL RESOURCES

Take advantage of the Graduate School's professional development resources (<https://grad.wisc.edu/pd/>) to build skills, thrive academically, and launch your career.

### DEPARTMENT RESOURCES

A goal for our graduate program is to provide students in Integrative Biology 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). In consultation with the student's advisor and advisory committee, students can engage in professional development, teaching training (e.g., through the Delta program), internships in industry, science writing, and/or policy, and some earn master's degrees in areas that complement their studies in Integrative Biology (e.g., biostatistics, biotechnology).

## LEARNING OUTCOMES

1. Knowledge: Master fundamental skills in at least one of the broad subject areas represented in the Department of Integrative Biology.
2. Research: Students will complete an original research project in one of the broad subject areas represented in the Department of Integrative Biology.
3. Communication: Effectively communicate in writing and orally.
4. Ethical Conduct: Students will have an understanding of professional and ethical responsibility.
5. Career Preparation: Students will be 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).

## PEOPLE

### FACULTY

Professors Ritters (chair, [lvriters@wisc.edu](mailto:lvriters@wisc.edu)), Bement, Blair, Damschen, Gammie, Halloran, Hardin, Ives, Lee, Newmark, Orrock, Stanley, Turner, and Vander Zanden

Associate Professors Amann, Grinblat, and Jensen

Assistant Professors Drerup, Dugan, Ehrlich, Ragsdale, Sharma, Wang, Weber, and Wilkinson

Adjunct Professor Peckarsky

### AFFILIATED FACULTY

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

Associate Professors Hittinger, Pool, and Schoville

Assistant Professor Sharp