

ENTOMOLOGY, MS

The department is a diverse unit of researchers whose work spans the areas of suborganismal, organismal, and applied entomology. Research programs of the faculty are broadly interdisciplinary employing cutting-edge technology in all areas. Individual faculty web pages provide in-depth descriptions of the diversity of research in entomology.

Suborganismal: Research in the department focuses on insect physiology and population genetics. Areas of specialization include the molecular action of insect hormones and the insect/microbiome interface. Studies of gene flow utilize various molecular methods. Genomic data are used to understand adaptation, gene flow on landscapes, the genetic basis of phenotypes, and the phylogenetic relationships of insect species.

Organismal: Entomology faculty members are leaders in the areas of basic ecology of insects in a variety of natural and managed systems, such as forests, lakes, and agroecosystems. Studies in taxonomy, chemical ecology, spatial analysis, vector biology, behavioral ecology, and landscape ecology have strong representation in the department. Research examines how they affect crops and forests, influence ecosystem processes such as nutrient and carbon cycling and the "services" they provide in natural and managed ecosystems such as pollination and pest suppression.

Applied/Extension: Faculty in the department extend a long tradition of research on insects as they impact humans. Excellence in agricultural research continues in vegetable crops, field and forage crops, and the turf and ornamental "green industry" where work has continued to advance the application of integrated pest management in agricultural systems. Basic research conducted by faculty in cropping systems also has implications for pest management, conservation, bioenergy, and resource management. This research extends to global health issues focusing on arthropod-borne diseases and insects as a novel food source.

Research in the department explores the interconnections across scales of biological organization, from molecular and cellular interactions to ecosystem-level studies, in both managed and natural systems, and from basic to applied research. Faculty members collaborate with colleagues in other departments in the College of Agricultural and Life Sciences, and beyond the college and university.

Graduate education in the Department of Entomology provides many opportunities for collaborative research. Faculty members participate in joint instructional programs with other departments on campus and with scientists at other universities, in federal and state agencies, and in industry. Because several entomology faculty members are also adjunct professors in zoology, forest and wildlife ecology, molecular and environmental toxicology, and other departments, they may serve as primary advisers to graduate students majoring in those fields. Opportunities exist to conduct research in a variety of distant tropical and temperate regions, to gain experience in classroom instruction and individual mentoring, and to participate in outreach activities such as addressing K-12 classes, naturalist groups, and commodity producers.

ADMISSIONS

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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	October 1
Summer Deadline	December 1
GRE (Graduate Record Examinations)	Not required.
English Proficiency Test	Refer to the Graduate School: Minimum Requirements for Admission policy: https://policy.wisc.edu/library/UW-1241 (https://policy.wisc.edu/library/UW-1241/).
Other Test(s) (e.g., GMAT, MCAT)	n/a
Letters of Recommendation Required	3

APPLICATION

The Graduate School sets minimum requirements for admissions (<https://grad.wisc.edu/admissions/requirements/>). Academic program admission requirements are often more rigorous than those set by the Graduate School. Please check the program's website (<https://entomology.wisc.edu/graduate-study/application-process/>) for details.

Application Materials and Checklist

Each applicant must complete the following:

- **Graduate School Application Form and Application Fee**
 - All applicants must complete the Graduate School's online application (<https://grad.wisc.edu/apply/>)
 - Submission of the application must be accompanied by the one-time application fee. See the Graduate School for FAQs (<https://grad.wisc.edu/apply/>) about application fee grants. Fee grants are only available through the conditions outlined here by the Graduate School (<https://grad.wisc.edu/apply/fee-grant/>). The Department of Entomology has limited fee grants to offer. Please contact the Graduate Program Manager to learn more.
- **Academic Transcript:** Within the online application, upload undergraduate transcript(s) and, if applicable, the previous graduate transcript. Unofficial copies of transcripts are required for review, but official copies are required for admitted applicants. Please do not send transcripts or any other application materials to the Graduate School or the Department of Entomology unless requested. Review the requirements set by the Graduate School (<https://grad.wisc.edu/apply/requirements/>) for additional information about degrees/transcripts.
- **Statement of Purpose:** In the statement of purpose, applicants should explain why they want to pursue further education in Entomology at UW-Madison (see the Graduate School for more advice on how to structure a personal statement (<https://grad.wisc.edu/apply/prepare/>)).

- **Resume:** Upload your resume in your application.
- **Three Letters of Recommendation:** These letters are required from people who can accurately judge the applicant's academic and/or work performance. Letters of recommendation are submitted electronically to graduate programs through the online application. See the Graduate School for FAQs (<https://grad.wisc.edu/apply/>) regarding letters of recommendation. Letters of recommendation are due by the deadline listed above.
- **English Proficiency Score:** If applicable – refer to table above.

Background Education

- **Degree:** Most applicants have a Bachelor of Science in a biological science discipline. Applicants with an undergraduate degree in other physical or natural sciences will be considered for admission. International applicants must have a degree comparable to a regionally accredited US bachelor's degree; biological, physical or natural sciences preferred.
- **GPA:** The minimum GPA to be reviewed by the admission committee is 3.0/4.0.

Faculty Advisors

Applicants are strongly encouraged to reach out to program faculty before applying. Admittance depends on appropriate fit within a research lab and the faculty member's ability to fund a graduate student throughout their degree program.

REENTRY ADMISSIONS

The program follows the Graduate School: Readmission (<https://policy.wisc.edu/library/UW-1230/>) policy. Applicants should contact the Graduate Program Manager with questions.

CURRENTLY ENROLLED GRADUATE STUDENT ADMISSIONS

Current UW-Madison graduate students who wish to add or change program should contact the Graduate Program Manager with questions.

FUNDING

FUNDING

GRADUATE SCHOOL RESOURCES

[The Bursar's Office provides information about tuition and fees associated with being a graduate student. Resources to help you afford graduate study might include assistantships, fellowships, traineeships, and financial aid. Further funding information is available from the Graduate School.](#)
Be sure to check with your program for individual policies and restrictions related to funding.

PROGRAM RESOURCES

Additional information regarding funding for Entomology graduate students is available on the departmental website (<https://entomology.wisc.edu/>).

REQUIREMENTS

MINIMUM GRADUATE SCHOOL REQUIREMENTS

Review the Graduate School minimum degree requirements (<https://guide.wisc.edu/graduate/#requirementstext>) and policies (<https://guide.wisc.edu/graduate/#policiestext>), in addition to the program requirements listed below.

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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 typically take enough credits aimed at completing the program in a year or two.

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

Requirement Detail	
Minimum Credit Requirement	30 credits
Minimum Residence Credit Requirement	16 credits
Minimum Graduate Coursework Requirement	15 credits must be graduate-level coursework. Refer to the Graduate School: Minimum Graduate Coursework (50%) Requirement policy: https://policy.wisc.edu/library/UW-1244 (https://policy.wisc.edu/library/UW-1244/).
Overall Graduate GPA Requirement	3.00 GPA required. Refer to the Graduate School: Grade Point Average (GPA) Requirement policy: https://policy.wisc.edu/library/UW-1203 (https://policy.wisc.edu/library/UW-1203/).
Other Grade Requirements	n/a
Assessments and Examinations	Students are required to hold a coursework certification meeting, submit certification paperwork, and hold a final defense exam.
Language Requirements	None.

REQUIRED COURSES

Code	Title	Credits
Core Course		
ENTOM/ ZOOLOGY 302	Introduction to Entomology	4

Core Categories

Students must complete a total of 2 courses for a minimum of 6 credits. The courses must be from different categories. 6-8

Organismal

ENTOM 331	Taxonomy of Mature Insects
ENTOM 432	Taxonomy and Bionomics of Immature Insects
ENTOM 450	Basic and Applied Insect Ecology
ENTOM/ BOTANY/ ZOOLOGY 473	Plant-Insect Interactions
ENTOM 490	Biodiversity and Global Change
ENTOM 701	Advanced Taxonomy

Sub-organismal

ENTOM 321	Physiology of Insects
ENTOM/ BOTANY/ PL PATH 505	Plant-Microbe Interactions: Molecular and Ecological Aspects
ENTOM/ GENETICS/ ZOOLOGY 624	Molecular Ecology

Applied

ENTOM/M M & I/ PATH-BIO/ ZOOLOGY 350	Parasitology
ENTOM 351	Principles of Economic Entomology
ENTOM/ ZOOLOGY 371	Medical Entomology: Biology of Vector and Vector-borne Diseases
ENTOM 450	Basic and Applied Insect Ecology
ENTOM 490	Biodiversity and Global Change

Seminars

Students should select seminars in consultation with their advisor, which may include seminars from outside departments. 2

ENTOM 801	Colloquium
ENTOM/ BOTANY/ F&W ECOL/ ZOOLOGY 821	Foundations of Ecology
ENTOM 901 or ENTOM 875	Seminar in Organismal Entomology Special Topics

Additional Credits

Students must take additional credits, in consultation with their advisor, to reach a total of 30 credits. This may include ENTOM 990. 16-18

Total Credits 30

POLICIES**GRADUATE SCHOOL POLICIES**

The Graduate School's Academic Policies and Procedures (<https://grad.wisc.edu/acadpolicy/>) serve as the official document of record for Graduate School academic and administrative policies and procedures and are updated continuously. Note some policies redirect to entries in the

official UW-Madison Policy Library (<https://policy.wisc.edu/>). Programs may set more stringent policies than the Graduate School. Policies set by the academic degree program can be found below.

MAJOR-SPECIFIC POLICIES**PRIOR COURSEWORK****Graduate Credits Earned at Other Institutions**

Students may transfer up to 14 credits of graduate coursework earned at another institution. The use of prior coursework requires Advisory Committee and Academic Affairs Committee approval. Coursework earned ten or more years prior to admission to a master's degree is not allowed to satisfy requirements.

Undergraduate Credits Earned at Other Institutions or UW-Madison

Refer to the Graduate School: Transfer Credits for Prior Coursework (<https://policy.wisc.edu/library/UW-1216/>) policy. The use of prior coursework requires Advisory Committee and Academic Affairs Committee approval. Coursework earned ten or more years prior to admission to a master's degree is not allowed to satisfy requirements.

Credits Earned as a Professional Student at UW-Madison (Law, Medicine, Pharmacy, and Veterinary careers)

Refer to the Graduate School: Transfer Credits for Prior Coursework (<https://policy.wisc.edu/library/UW-1216/>) policy.

Credits Earned as a University Special Student at UW-Madison

With Advisory Committee and Academic Affairs Committee approval, the student may transfer up to 15 University Special student credits in fulfillment of the graduate degree credit requirements on occasion as an exception (on a case-by-case basis). UW-Madison coursework taken as a University Special student would not be applied toward the Minimum Graduate Coursework (50%) Requirement unless taken in coursework numbered 700 or above or as part of a capstone certificate. Coursework earned ten or more years prior to admission to a master's degree is not allowed to satisfy requirements.

PROBATION

Refer to the Graduate School: Probation (<https://policy.wisc.edu/library/UW-1217/>) policy.

ADVISOR / COMMITTEE

Refer to the Graduate School: Advisor (<https://policy.wisc.edu/library/UW-1232/>) and Graduate School: Committees (Doctoral/Master's/MFA) (<https://policy.wisc.edu/library/UW-1201/>) policies.

CREDITS PER TERM ALLOWED

15 credit maximum. Refer to the Graduate School: Maximum Credit Loads and Overload Requests (<https://policy.wisc.edu/library/UW-1228/>) policy.

TIME LIMITS

Refer to the Graduate School: Time Limits (<https://policy.wisc.edu/library/UW-1221/>) policy.

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/>)
- 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 Student Assistance and Support (OSAS) (<https://osas.wisc.edu/>) (for all students to seek grievance assistance and support)
- 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)

College of Agricultural and Life Sciences: Grievance Policy

In the College of Agricultural and Life Sciences (CALS), any student who feels unfairly treated by a member of the CALS faculty or staff has the right to complain about the treatment and to receive a prompt hearing. Some complaints may arise from misunderstandings or communication breakdowns and be easily resolved; others may require formal action. Complaints may concern any matter of perceived unfairness.

To ensure a prompt and fair hearing of any complaint, and to protect the rights of both the person complaining and the person at whom the complaint is directed, the following procedures are used in the College of Agricultural and Life Sciences. Any student, undergraduate or graduate, may use these procedures, except employees whose complaints are covered under other campus policies.

1. The student should first talk with the person at whom the complaint is directed. Most issues can be settled at this level. Others may be resolved by established departmental procedures.
2. If the student is unsatisfied, and the complaint involves any unit outside CALS, the student should seek the advice of the dean or director of that unit to determine how to proceed.
 - a. If the complaint involves an academic department in CALS the student should proceed in accordance with item 3 below.
 - b. If the grievance involves a unit in CALS that is not an academic department, the student should proceed in accordance with item 4 below.
3. The student should contact the department's grievance advisor within 120 calendar days of the alleged unfair treatment. The departmental

administrator can provide this person's name. The grievance advisor will attempt to resolve the problem informally within 10 working days of receiving the complaint, in discussions with the student and the person at whom the complaint is directed.

- a. If informal mediation fails, the student can submit the grievance in writing to the grievance advisor within 10 working days of the date the student is informed of the failure of the mediation attempt by the grievance advisor. The grievance advisor will provide a copy to the person at whom the grievance is directed.
 - b. The grievance advisor will refer the complaint to a department committee that will obtain a written response from the person at whom the complaint is directed, providing a copy to the student. Either party may request a hearing before the committee. The grievance advisor will provide both parties a written decision within 20 working days from the date of receipt of the written complaint.
 - c. If the grievance involves the department chairperson, the grievance advisor or a member of the grievance committee, these persons may not participate in the review.
 - d. If not satisfied with departmental action, either party has 10 working days from the date of notification of the departmental committee action to file a written appeal to the CALS Equity and Diversity Committee. A subcommittee of this committee will make a preliminary judgement as to whether the case merits further investigation and review. If the subcommittee unanimously determines that the case does not merit further investigation and review, its decision is final. If one or more members of the subcommittee determine that the case does merit further investigation and review, the subcommittee will investigate and seek to resolve the dispute through mediation. If this mediation attempt fails, the subcommittee will bring the case to the full committee. The committee may seek additional information from the parties or hold a hearing. The committee will present a written recommendation to the dean who will provide a final decision within 20 working days of receipt of the committee recommendation.
4. If the alleged unfair treatment occurs in a CALS unit that is not an academic department, the student should, within 120 calendar days of the alleged incident, take his/her grievance directly to the Associate Dean of Academic Affairs. The dean will attempt to resolve the problem informally within 10 working days of receiving the complaint. If this mediation attempt does not succeed the student may file a written complaint with the dean who will refer it to the CALS Equity and Diversity Committee. The committee will seek a written response from the person at whom the complaint is directed, subsequently following other steps delineated in item 3d above.

OTHER

n/a

PROFESSIONAL DEVELOPMENT

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.

PROGRAM RESOURCES

Students in the Department of Entomology are strongly encourage to participate in student organization activities (<https://entomology.wisc.edu/graduate-study/student-organizations/>).

LEARNING OUTCOMES

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1. Develop a broad knowledge base of entomology, inclusive of suborganismal, organismal, and applied entomology.
2. Knowledge of laboratory and/or field methodology.
3. Recognize relationships between structure and function at appropriate levels- molecular, cellular, organismal or ecological.
4. Explain and apply scientific methods including designing and conducting experiments and testing hypotheses.