



MASTER OF SCIENCE
BIOLOGY

PURDUE UNIVERSITY®
FORT WAYNE

**Office of
Graduate Studies**

PFW.EDU/GRADUATE

A MESSAGE FROM THE DIRECTOR

The Department of Biological Sciences at Purdue University Fort Wayne offers a Master of Science degree with coursework and research opportunities covering the wide breadth of the biological sciences. Faculty within the department teach courses and conduct research in areas of population and community biology, organismal biology and genetics, cellular, and molecular biology.

We offer two pathways to completion of an M.S. degree in Biology: thesis and non-thesis. The thesis option M.S. is a research degree that requires completion of a thesis as an original contribution to the field. The non-thesis option is coursework intensive. In both, students develop and design their own plan of study in cooperation with their faculty advisor and committee.

Our graduate students and faculty conduct research in both the lab and field, as well as at local sites and around the world. Many of our graduate students receive financial support through teaching or research assistantships, both of which are competitively awarded to students. Graduates from our program follow diverse career paths from employment in private and governmental jobs to acceptance into medical schools and Ph.D. programs.

Interested applicants should contact individual faculty with similar interests to discuss research opportunities. Regardless of what aspect of biology excites you, there is a faculty member here who is equally excited.



Jordan Marshall, Ph.D.

Professor
Biology Graduate Program Director
marshalj@pfw.edu

FACULTY



Scan code to learn more about
our faculty research



Dr. Scott Bergeson
Mammalogy, Wildlife Biology,
Conservation, Ecology, Bats



Dr. Jaiyanth Daniel
Molecular Microbiology, Lipid
Biochemistry, Antimicrobial Resistance,
Microbial Biofilms



Dr. Benjamin Dattilo
Paleontology, Biomechanics and Sclerochronology
of Shelled Animals, Biology of Modern
Reef-Dwelling Brachiopods



Dr. Mark Jordan
Population and Conservation Genetics,
Herpetology, Evolutionary Ecology
and Adaptation



Dr. Bruce Kingsbury
Conservation of Endangered Reptiles,
Behavioral and Physiological Ecology,
Habitat Use



Dr. Connie Kracher
Diagnostic Sciences, Human Physiology,
Oral Biology



Dr. Jordan Marshall
Plant Biology, Disturbance Ecology,
Forest Development



Dr. Lisa McLellan
Microbial Genetics, Microbial
Pathogenesis, Oral Microbiology



Dr. Ahmed Mustafa
Physiology, Pharmacology, Aquaculture,
Aquatic Biology



Dr. Frank Paladino
Vertebrate Physiology and
Physiological Ecology,
Conservation, Marine Turtle
Biology, Aquatic Toxicology



Dr. Rebecca Palu
Natural Genetic Variation, Cellular
and Metabolic Stress, Drosophila



Dr. Jose Thekkiniath
Parasitology, Immunology



Dr. Zhou Zhou
Plant Functional Genomics
& Biotechnology

BENEFITS

ACHIEVE YOUR ACADEMIC AND PROFESSIONAL GOALS

Our graduate program offers a Master of Science degree in Biology. We have a diverse faculty with a wide range of specific research interests. Students may take graduate courses and perform their own research projects in a variety of areas, including developmental biology, behavioral biology, ecology, forestry, genetics, immunology, microbiology, physiology and toxicology. Both thesis and nonthesis options are available in all of these areas. Graduate students enrolled in any thesis option are eligible to receive teaching assistantships, which are awarded on a competitive basis.

Our program is designed to prepare an individual to work towards one or more of the following goals:

- Become a research scientist in academia or industry
- Obtain advanced training in a professional or graduate school

TEACHING ASSISTANTSHIPS

A limited number of teaching assistantships (TAs) are available from the Department of Biological Sciences. These are awarded on a competitive basis, thus acceptance into the program does not guarantee receipt of a TA position. Research assistantships (RAs) are also available as a result of external funding for faculty. The RA positions are awarded to accepted graduate students by individual faculty members rather than the department. Application deadlines differ for students interested in attaining these positions:

- Fall admission: February 15
- Spring admission: August 15

THE PURDUE FORT WAYNE DIFFERENCE

Stand out with a graduate degree that enhances your qualifications through:

- Small class sizes
- Personal attention from dedicated faculty
- Course offerings designed for working adults
- Internationally recognized degree at a fraction of the cost

"I came into the PFW Biology graduate program with a specific learning plan, but I leave the program with a much more diverse academic background than I could have planned. This is thanks to the excellent advising at PFW and the ability to explore interests beyond my thesis, even as a focused, graduate student. I am constantly impressed with the accomplishments and dedication of not only the faculty, but also the other graduate students in the department. The small class sizes are also a benefit, as professors are attentive and personable."

Laura St. Andrews

"The Biology Graduate Program experience to me has been one of personal growth. The classes and field work offered were informative, current, and interactive. I have benefited from the approachable and eager to help faculty and staff. In such a supportive environment, I have been able to increase expertise in my field, learn interdisciplinary skills, and gain experience as an educator. I am looking forward to the next step, given the tools I have acquired here."

Zach Kellogg

COURSES

MASTER OF SCIENCE IN BIOLOGY (30 CREDIT HOURS)

The student's plan of study is variable and determined by the student and their committee to ensure students develop the skills and tools necessary to advance their careers. Students may pursue a non-thesis or a thesis option.

NON-THESIS OPTION

The non-thesis option is for students who want to complete the program without completing a written thesis. At least 30 credit hours of course work are required. Of these, 15 credit hours must be at the 500 level within the Department of Biological Sciences. The remaining 15 hours can be fulfilled by some combination of the following:

- Additional BIOL courses at the 500 level
- Up to 9 credit hours of BIOL 59500 (Special Assignments)
- Up to 6 credit hours of undergraduate courses at the 300 or 400 level taken from other departments (students must earn a grade of no lower than B); or up to 15 credits of 500-level courses in other departments.

This option includes a final exam in the last semester, prepared by the student's committee, focused on the student's area of concentration.

THESIS OPTION

The thesis option is for students who are interested in preparing a written thesis for their area of research. Students will submit a research proposal to their thesis committee prior to the beginning of their third semester in the program. Students selecting the thesis option must obtain a minimum of 30 credit hours in formal course work and research credit combined. A minimum of 18 credit hours of formal course work approved by the student's committee is required. The remaining 12 credits can be:

- Exclusively BIOL 69800 Research M.S. Thesis, or;
- A combination of at least 9 credits in BIOL 69800 and up to 3 credits in BIOL 59500 Special Assignments. BIOL 59500 credit cannot be included in the 18 credit hours of formal course work.

AREAS OF STUDY

CORE REQUIREMENT

BIOL 66201 Professional Development

ORGANISMAL BIOLOGY

BIOL 50100 Field Botany
BIOL 50500 Biology of Invertebrate Animals
BIOL 51810 Biomedicine
BIOL 52000 Contemporary Parasitology
BIOL 53300 Medical Microbiology
BIOL 53700 Immunobiology
BIOL 53901 Microbiomes
BIOL 54210 Biometry
BIOL 54400 Principles of Virology
BIOL 55600 Physiology I
BIOL 55900 Endocrinology
BIOL 56500 Immunobiology Laboratory
BIOL 56600 Developmental Biology
BIOL 56700 Laboratory in Developmental Biology
BIOL 57710 Emerging Infectious Diseases
BIOL 58000 Evolution
BIOL 58600 Topics in Behavior and Ecology
BIOL 59500 Special Assignments
FNR 50500 Molecular Ecology and Evolution

POPULATION AND COMMUNITY BIOLOGY

BIOL 50100 Field Botany
BIOL 50200 Conservation Biology
BIOL 50330 Disturbance Ecology
BIOL 50401 Mammalogy
BIOL 50500 Biology of Invertebrate Animals
BIOL 52000 Contemporary Parasitology
BIOL 54110 Invasion Biology
BIOL 54210 Biometry
BIOL 54300 Population Ecology
BIOL 56011 Genomics: Concepts and Applications
BIOL 57710 Emerging Infectious Diseases
BIOL 58000 Evolution
BIOL 58200 Ecotoxicology
BIOL 58600 Topics in Behavior and Ecology
BIOL 595 Special Assignments
FNR 50500 Molecular Ecology and Evolution

GENETICS, CELLULAR, AND MOLECULAR BIOLOGY

BIOL 50600 Human Molecular Genetics
BIOL 50900 Molecular Biology and Applications
BIOL 51501 Non-Mendelian Genetics
BIOL 51600 Molecular Biology of Cancer
BIOL 52410 Bacterial Diversity and Systematics
BIOL 52601 Eukaryotic Microbiology
BIOL 53300 Medical Microbiology
BIOL 53700 Immunobiology
BIOL 53901 Microbiomes
BIOL 54000 Biotechnology
BIOL 54300 Population Ecology
BIOL 54400 Principles of Virology
BIOL 55110 Proteins: Structure and Function
BIOL 55600 Physiology I
BIOL 55900 Endocrinology
BIOL 56011 Genomics: Concepts and Applications
BIOL 56500 Immunobiology Laboratory
BIOL 56600 Developmental Biology
BIOL 56700 Laboratory in Developmental Biology
BIOL 57710 Emerging Infectious Diseases
BIOL 58000 Evolution
BIOL 58301 Environmental and Agricultural Microbiology
BIOL 58302 Laboratory in Environmental and Agricultural Microbiology
BIOL 58400 Molecular Biology and Applications Laboratory
BIOL 59500 Special Assignments
FNR 50500 Molecular Ecology and Evolution

APPLICATION DEADLINES

**FEB
15**

U.S. Citizen: fall admission seeking TA position
International: regular fall admission

**APR
15**

U.S. Citizen: regular fall admission

**AUG
15**

U.S. Citizen: spring admission seeking TA
position International: regular spring admission

**OCT
15**

U.S. Citizen: regular spring admission

STEPS TO APPLY

Application:

To begin your application create an account through the portal at pfw.edu/grad-apply. Applicants can make and save changes before submitting by logging in with the username and password used to create the account.

Application Fee:

The Graduate School application fee is \$60 (U.S. dollars) for domestic applicants and \$75 (U.S. dollars) for international applicants. Your application will not be processed until your nonrefundable application fee has been paid.

Transcripts:

Through the application portal, you must upload transcript(s) and/or academic document(s) for every institution of higher education you attended regardless of whether or not a degree was received. If a degree was received then it must be printed on the transcripts. If no degree conferral is printed on the transcripts then a copy of the original diploma (degree certificate) is needed. If the documents are not in English, you must upload an English translation certified by the college or university that issued it. For those who have completed degrees in the People's Republic of China, you will also be required to submit the Graduation Certificate.

Statement of Purpose (Essay):

The Academic Statement of Purpose is typically a 500-word statement that outlines:

- Your academic and professional background, detailing how your experiences have prepared you for graduate study in this field.
- Your career goals and how a graduate degree from Purdue Fort Wayne will help you achieve them.

Focus on demonstrating how you fit with the program by discussing faculty members you want to work with, the program's qualities, or specific research or career opportunities.

Personal History Statement:

Approximately 500 words, highlights your unique experiences, challenges, and achievements that have shaped who you are today. This is your chance to share:

- Your personal background, such as your upbringing, or life events that influenced your perspective.
- Why you're a good fit for Purdue Fort Wayne's program beyond academics, emphasizing personal qualities like resilience, leadership, or community engagement.

This statement is your opportunity to stand out and present a compelling narrative about your journey and why you want to earn your graduate degree at Purdue Fort Wayne.

Recommendations:

Submit names of at least two individuals who are qualified to evaluate your academic or on-the-job performance who can attest to your ability to pursue a graduate degree. In the online application to the Purdue Graduate School, once you click "Send to Recommender," each individual will receive an email with instructions for submitting their recommendation online. Once submitted, the graduate program to which you applied will have access to view your recommendation(s).

INTERNATIONAL APPLICANTS

All international applicants must also submit the following items to be considered for admission:

- **English Proficiency Scores:**

TOEFL iBT Overall Score: 80 with the following minimum section requirements:

Reading: 19

Listening: 14

Speaking: 18

Writing: 18

IELTS Overall Score: 6.5 with the following minimum section requirements:

Reading: 6.5

Listening: 6.0

Speaking: 6.0

Writing: 5.5

TOEFL Essentials Overall Score: 8 with the following minimum section requirements:

Reading: 8

Listening: 8

Speaking: 8

Writing: 8

Duolingo English Test Overall Score: 115 with the following minimum section requirements:

Literacy: 115

Comprehension: 115

Conversation: 115

Production: 115

ELS- Certificate Level 112

Waiver of English Proficiency Scores

Routine waivers of an English Proficiency exam are granted for applicants that meet an alternate criterion:

- Earned a Baccalaureate, graduate, or professional degree within the last 36 months prior to the time of recommendation for admission - from a school where English is the primary language of instruction, in a country where English is the native language.
- Citizen of official English-speaking country

Note: Some graduate programs may still require a test of English proficiency, please confirm the acceptance of the waiver with your department.

OFFICIAL TRANSCRIPTS

You must provide official transcripts and/or academic records at the request of the graduate program or if you are admitted and choose to enroll. An official transcript bears the original signature of the registrar and/or the original seal of the issuing institution. An unofficial transcript printed from your current/previous institution(s) student system is not an acceptable document. Official documents should be submitted to:

Purdue University Fort Wayne
Office of Graduate Studies
Doermer School of Business Room 304
2101 E. Coliseum Blvd.
Fort Wayne, IN 46805-1499, USA
graduate@pfw.edu

Domestic transcripts must be sent directly from a Registrar's office to the Office of Graduate Admissions via mail or email. If you mail them yourself, it must be in an envelope sealed by the registrar.

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