BIOLOGY (PHD)

Doctor of Philosophy in Biology
Unit: College of Arts and Sciences (http://louisville.edu/artsandsciences/intro/) (GA)
Department: Biology (http://louisville.edu/biology/graduate/)
Program Website (http://louisville.edu/biology/graduate/)
Academic Plan Code(s): BIOLPHDEEB, BIOLPHDMCD

Program Information

A broad range of courses are taught in most biological disciplines, although the department is focused in two major directions. Faculty in the Divisions of Molecular, Cellular, and Developmental Biology (MCD) and Evolution, Ecology and Behavioral Biology (EEB) have research interests in environmental microbiology, population and microbial genetics, developmental biology, plant and animal physiology, metabolism, plant and animal ecology, behavioral ecology, invertebrate zoology, and community and ecosystem ecology.

Students seeking the PhD Degree in Biology traditionally have a master's degree or its equivalent; however, students may enter the program with only the baccalaureate degree. Generally, the first year or two is spent in coursework, research is begun by the second year, and the thesis/dissertation completed in the final year.

Graduate Assistantships and Other Financial Support

Graduate Teaching Assistantships (GTA) are awarded by the Graduate Committee of the Department of Biology to meet the instructional needs of the Department and enhance and broaden the educational experience of doctoral students. All newly admitted students are automatically considered for this type of annual support, which includes a monthly stipend, tuition remission, and health insurance.

Financial support may also be available from individual faculty members who have research funding that supports graduate students as Graduate Research Assistants (GRA). The faculty members holding this support select students to fill these positions.

A small number of the most highly qualified accepted applicants will be nominated by the Department for University Fellowship awards, which carry a monthly stipend, tuition remission, and health insurance benefits. These students must meet qualifications set by the Graduate School.

Admission Requirements

The following requirements must be met in order to be admitted to the PhD program in the Department of Biology:

a. The applicant must have a baccalaureate degree with a major in biology or an acceptable sub-discipline of biology.
b. The applicant must meet the following admissions standards:
   - Undergraduate GPA of 3.0 or higher
   - While there is no minimum requirement for GRE scores, competitive students usually have scores around the 50th percentile or better on the general GRE test (verbal + quantitative). **NOTE: SUBMISSION OF GRE SCORES IS OPTIONAL. WE SUGGEST ONLY SUBMITTING SCORES IF THEY WILL HELP PROVIDE A MORE HOLISTIC PERSPECTIVE TO YOUR APPLICATION. GRE SCORES ARE NOT USED FOR FUNDING DECISIONS.**
   - For foreign students, a TOEFL score of 79 on the internet-based exam; at least 6.5 on the IELTS exam or Duolingo score of 105 (students holding a baccalaureate or advanced degree from an accredited institution in the United States are exempt from this requirement.
c. All applicants must review the research specialties of the departmental faculty to ensure that an area compatible with the student's interest is available. Applicants for the PhD program must communicate with a member of the biology faculty prior to admission and receive agreement that the faculty member will serve as the major professor. No formal admission to the program can occur without the preliminary acceptance of a mentor. Faculty contact information is available at louisville.edu/biology (http://louisville.edu/biology/).

Your application will be complete when we have all of the following (final action on an application cannot be taken until all items have been received):

Official documentation must be sent to the Graduate School. Send the following:

- Completed graduate application (https://louisville.edu/graduate/futurestudents/apply-materials/application/) and application fee;
- One official transcript of all previous undergraduate and graduate coursework. All academic credentials not in English must be accompanied with a notarized verbatim English translation in addition to official transcripts. If you studied outside of the United States, you are required to submit your academic records to a NACES (National Association of Credential Evaluation Services) verified credential evaluation service for a course-by-course evaluation to determine that your degree is equivalent to a US bachelor's degree.
- Official GRE scores (optional)
- Two or more letters of recommendation from persons familiar with your academic performance; and
- Official TOEFL, IELTS or Duolingo scores (international students).

Deadline for completed applications:

- July 1* for Fall admission
- November 1 for Spring admission.

*For full consideration for financial support, Ph.D. applications should be completed by January 15 for Fall admission.

Degree Requirements for the PhD in Biology

Code	Title	Hours
Foundations in Biology		
BIOL 600	Graduate Seminar I	1
BIOL 601	Graduate Seminar II	1
One course to be selected by the student's committee from each category:		
Biostatistics		4
Evolutionary Biology [1]		4
Focus Area		
Select two courses from within an Area of Focus:		8

Ecology, Evolution and Behavioral (EEB) Biology Focus Area:		
Population and Community Ecology		
Ecosystem Ecology or Behavioral Ecology		
Molecular, Cellular and Develpmental (MCD) Biology Focus Area:		
Genetics/Cellular [2]		
Physiology [3]		
Advanced Biology Electives		16
BIOL 700	Dissertation Research	7
Minimum Total Hours		**41**

[1] Courses that cover the evolutionary history and/or phlogenetic relationships of molecules or organisms
[2] Courses that discuss the biochemistry and molecular genetics of life or describe the cell as the structural and functional unit of life
[3] Courses that discuss life processes at the level of the organism