SAINT LOUIS UNIVERSITY
GRADUATE EDUCATION

Biology
+ College of Arts and Sciences

Saint Louis University is a Catholic, Jesuit institution that values academic excellence, life-changing research, compassionate health care, and a strong commitment to faith and service.

Founded in 1818, the University fosters the intellectual and character development of nearly 14,000 students on two campuses in St. Louis, Missouri, and Madrid, Spain. Building on a legacy of nearly 200 years, Saint Louis University continues to move forward with an unwavering commitment to a higher purpose, a greater good.

OVERVIEW ///

The department of biology at Saint Louis University provides coursework and research opportunities in a broad array of biological fields, including botany, cell biology, ecology, evolution, genetics and genomics, molecular biology, physiology and science pedagogy. Students may elect to pursue a master's or doctoral degree.

The biology curriculum is enriched by interactions with the Missouri Botanical Garden, the Saint Louis Zoo, the Donald Danforth Plant Science Center and the Saint Louis University School of Medicine, and the department has many ongoing collaborations with researchers at these institutes. The department also owns and operates the Reis Biological Field Station, which provides unique opportunities for students to conduct research in ecology and conservation biology.

M.A.:
This program is designed to prepare graduates for further training or for careers in academic, private or government sectors. The M.A. program emphasizes coursework and does not require a thesis. Students applying for an M.A. degree generally desire to broaden their knowledge and/or become more competitive in seeking employment or gaining admission into a health science program (medical school, dentistry, etc.). The program requires at least 30 postbaccalaureate credit hours.

M.S.:
Students applying to the M.S. program may do so for reasons similar to those applying to the M.A. program. However, they also desire to gain experience in laboratory research, including experimental design, interpretation of data and scientific writing. The M.S. degree requires a formal research project and thesis and is excellent preparation for continued graduate studies at the doctoral level, or for employment at environmental, industrial or research companies. The program requires at least 30 postbaccalaureate credit hours, six credit hours of which may be thesis research.

Ph.D.:
Doctoral studies emphasize intensive research training under the direction of a member of the graduate faculty. Once a Ph.D. student successfully completes required coursework and the written and oral qualifying examinations, he or she is expected to design and conduct an original research project and to work independently. The student will be required to present his or her work at local and/or national professional meetings and may also be expected to seek external funding to support the research project. Ideally, the student's research will result in publication in peer-reviewed scientific journals. A minimum of 36 postbaccalaureate credit hours are required, with at least 24 credit hours of coursework and 12 credit hours of dissertation research.

Career Paths:
Past students have gone on to careers as research scientists, teachers, university faculty and in various capacities in pharmaceutical companies and government agencies.
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FACULTY

Jan Barber, Ph.D.: Plant evolution and systematics, phylogenetics, biogeography
Peter Bernhardt, Ph.D.: Floral evolution, pollination biology, systematics of the flora of the Pacific
Elena Bray Speth, Ph.D.: Teaching and learning biology at the college level
Gerardo Camilo, Ph.D.: Tropical ecology, landscape ecology, community ecology of forest insects
Lindsey Dodson, Ph.D.: Genetics, advanced cell biology, principles of biology II
Brian Downes, Ph.D.: Plant biochemistry, molecular biology and genetics
Jonathan Fisher, Ph.D.: Muscle physiology and diabetes
Kasey Fowler-Finn, Ph.D: Evolution and behavioral ecology
Blythe Janowiak, Ph.D.: Microbial biochemistry and molecular biology of bacteria
Jack Kennell, Ph.D.: Mitochondrial-nuclear interactions
Jason Knouft, Ph.D.: Aquatic ecology, biogeography, geographic information systems
Zhenguo Lin, Ph.D: Yeast genomics and molecular evolution
Richard Mayden, Ph.D.: Systematics, evolution, genomics and conservation of fishes
Allison Miller, Ph.D.: Evolutionary biology and population genetics
Shawn Nordell, Ph.D.: Fish behavioral ecology, mate choice and predator avoidance
Judith Ogilvie, Ph.D.: Development and disease of the vertebrate retina
Laurie Russell, Ph.D.: Principles of biology I, molecular genetics, physiology
Laurie Shornick, Ph.D.: Immunology, cellular and molecular biology
Susan Spencer, Ph.D.: Cell biology and signaling pathways in developing tissues
William S. Stark, Ph.D.: Visual receptor function, vitamin A, ultraviolet light perception in Drosophila
Thomas Valone, Ph.D.: Field station director, community ecology and conservation biology
Yuqi Wang, Ph.D.: Molecular mechanisms of signal transduction with an emphasis on G proteins and MAP kinases
Daniel Warren, Ph.D.: Comparative and evolutionary physiology
Robert Wood, Ph.D.: Molecular systematics and biogeography of freshwater fishes
Wenyun Xiao, Ph.D.: Genetics and plant biology of imprinting and reproduction in plants
Fenglian Xu, Ph.D: Neurobiology, synapse formation and neurotransmission

The biology program at SLU offers students:
• A broad scope of faculty research — ecology to biochemistry.
• Access to a full range of equipment and facilities.
• Financial assistance for most M.S. and Ph.D. students.

Graduate teaching and research assistantships are available. The department of biology strives to provide five years of support for Ph.D. students. More information can be found online at: sites.google.com/a/slu.edu/biology-graduate-program/home/prospective-students.