Biological Data Science, MS

Program Description

Degree Awarded: MS Biological Data Science

The MS program in biological data science provides students with real-world training at the interface of the natural and mathematical sciences. Students learn to manipulate "Big Data", including the generation and analysis of data using statistical and computational toolsets. Students will use their analytical skills in ecological, environmental, toxicological and other biological applications. The program incorporates multiple levels of experiential learning to ensure students gain critical-thinking skills on top of core competencies. Students will be ready to enter one of the fastest-growing job markets, work with consulting firms and government agencies as well as non-governmental organizations, or go on to seek advanced professional or graduate degrees.

At a Glance

- College/School: New College of Interdisciplinary Arts and Sciences
- Location: West campus

Degree Requirements

32 credit hours including the required applied project course (ACO 593, BIO 593 or MAT 593), or 32 credit hours and a thesis

Required Core (12 credit hours)
ACO 501 Database Systems and Problem Solving in Python (3)
BIO 614 Biometry (4)
LSC 519 Applied Learning Lab (1)
LSC 547 Wet Laboratory Experience (1)
STP 560 Experimental Statistics in Biology (3)
Other Requirements (9 credit hours)
LSC 555 Integrative Biology I (3)
LSC 556 Integrative Biology II (3)
LSC 562 Applied Mathematics Techniques in Biology (3)

Electives or Research (5 credit hours)

Culminating Experience (6 credit hours)
ACO 593 Applied Project (6)
BIO 593 Applied Project (6)
MAT 593 Applied Project (6)
ACO 599 Thesis (6)
BIO 599 Thesis (6)
MAT 599 Thesis (6)

Additional Curriculum Information
Other requirement, elective and research coursework may be substituted with approval of the academic unit.
Students should see the academic unit for the approved electives and research course list.

Students choose one culminating experience option based on their emphasis area in biological data science.

Admission Requirements

Applicants must fulfill the requirements of both the Graduate College and the New College of Interdisciplinary Arts and Sciences.

Applicants are eligible to apply to the program if they have earned a bachelor's or master's degree in a related field such as biology, mathematics, statistics or computing, as well as unrelated fields, from a regionally accredited institution.

Applicants must have a minimum of a 3.00 cumulative GPA (scale is 4.00 = "A") in the last 60 hours of their first bachelor's degree program, or applicants must have a minimum of a 3.00 cumulative GPA (scale is 4.00 = "A") in an applicable master's degree program.

All applicants must submit:

1. graduate admission application and application fee
2. official transcripts
3. statement of purpose
4. two letters of recommendation
5. professional resume  
6. proof of English proficiency

**Additional Application Information**

An applicant whose native language is not English (regardless of current residency) must provide proof of English proficiency.

It is preferred that letters of recommendation be from faculty members who know the applicant's work well; if these are not available, letters of recommendation from individuals in supervisory or professional roles will be accepted.

The statement of purpose should describe the educational background, scholarly interests, and academic and professional goals of the applicant.

Depending on student's educational background, deficiency courses may be required.

**Contact Information**

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