

# MASTER OF SCIENCE IN BIOLOGY WITH SPECIALIZATION IN APPLIED LIFE SCIENCES

It is an exciting time to be in the life sciences, with opportunity for students to be on the front lines of new drug discovery and technological innovation. The global life sciences industry is expanding to meet the needs of a growing and self-advocating, aging population. The discovery for and application of treatments and cures for serious illnesses such as heart disease, Alzheimer's, and diabetes is intensifying at a rapid rate. Simultaneously, there is a drive to improve our quality of life and life span.

The Master of Science in Biology with Specialization in Applied Life Sciences program is highly flexible but at its core provides education and preparation for professional biological careers and/or further education. The degree can be obtained without a thesis, entirely online, and full- or part-time.

## Admission Requirements

Preferred candidates will have a minimum cumulative undergraduate GPA of 3.0/4.0, though exceptions may be made with validated work experience. Graduate Record Examination (GRE) scores must be submitted with the following minimum scores: 305 (quantitative + verbal), and 2.5 (analytical writing). The GRE requirement is waived for applicants who hold a bachelor's degree with a cumulative undergraduate GPA of 3.0/4.0 or higher from a U.S. accredited institution of higher learning.

Any applicant whose undergraduate degree was earned at an institution where the primary language of instruction is not English must submit Test of English as a Foreign Language (TOEFL), Pearson Test of English (PTE), or International English Language Testing System (IELTS) scores, which must satisfy Illinois Institute of Technology's English language proficiency test requirements (see the Graduate Admission section for more information).

## Curriculum

Code	Title	Credit Hours
<b>Required Courses (20)</b>		
BIOL 504	Biochemistry	3
BIOL 515	Molecular Biology	3
BIOL 524	Science and Law: An Introduction to Intellectual Property Law and Patents	2
BIOL 544	Molecular Biology of Cells	3
BIOL 581	Capstone <sup>1</sup>	3
CHEM 519	Good Manufacturing Practices	3
MATH 525	Statistical Models and Methods	3
<b>Elective Courses (12)</b>		
Select a minimum of 12 credit hours from the following:		
BIOL 503	Virology	3
BIOL 512	Advanced Biochemistry	3
BIOL 514	Toxicology	3
BIOL 526	Developmental Biology	3
BIOL 527	Immunology and Immunochemistry	3
BIOL 542	Advanced Microbiology	3
BIOL 550	Bioinformatics	3
BIOL 555	Macromolecular Structure	3
BIOL 562	Current Topics in Functional Genomics	3
CHEM 518	Understanding the International Conference on Harmonization Guidelines	3
SCI 511	Project Management	3
SCI 522	Public Engagement for Scientists	3
<b>Total Credit Hours</b>		<b>32</b>

<sup>1</sup> BIOL 581 Capstone may be replaced with a suitable IPRO course at the program director's discretion.

Note: Up to nine credit hours of 400-level coursework, including six credit hours of IPRO courses, may fulfill degree requirements, per adviser approval.

Other requirements are identical to those described previously for all M.S. students in biology.