

BIOLOGICAL SCIENCES - CELL BIOLOGY AND MOLECULAR GENETICS - M.S.

College of Arts and Sciences
Department of Biological Sciences
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Kent Campus
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Description

The Master of Science degree in Biological Sciences–Cell Biology and Molecular Genetics is an individualized program of study and research that prepares students for career opportunities in teaching and research in academic, governmental and industrial settings. A core series of courses sets a rigorous foundation in theory, experimental design and technical knowledge of contemporary investigations at the cellular level of organization. Areas of research include developmental biology, cellular and developmental neuroscience, immunology, reproductive biology, cellular endocrinology and molecular genetics.

Fully Offered At:

- Kent Campus

Admission Requirements

- Bachelor's degree from an accredited college or university for unconditional admission
- Completion of undergraduate coursework roughly equivalent to a Biology minor
- Minimum 3.000 undergraduate GPA on a 4.000 point scale for unconditional admission
- Official transcript(s)
- GRE scores (general test)
- Goal statement
- Three letters of recommendation
- A list of up to five potential faculty advisors
- English language proficiency - all international students must provide proof of English language proficiency (unless they meet specific exceptions) by earning one of the following:
 - Minimum 587 TOEFL PBT score (paper-based version)
 - Minimum 94 TOEFL IBT score (Internet-based version)
 - Minimum 82 MELAB score
 - Minimum 7.0 IELTS score
 - Minimum 65 PTE score

For more information about graduate admissions, please visit the Graduate Studies admission website. For more information on international admission, visit the Office of Global Education's admission website.

Program Learning Outcomes

Graduates of this program will be able to:

1. Understand advanced biological concepts beyond the scope of the typical undergraduate degree and increase the depth of their knowledge through coursework and hands-on experiences.
2. Apply scientific principles and appreciate work outside of their particular field.
3. Effectively communicate about science with colleagues as well as those outside of the student's area of expertise.
4. Develop the necessary laboratory skills that will allow testing of hypotheses.

Program Requirements

Major Requirements

Code	Title	Credit Hours
Major Requirements		
BSCI 50142	BIOENERGETICS ¹	3
BSCI 50143	EUKARYOTIC CELL BIOLOGY	3
BSCI 60103	BIOLOGICAL STATISTICS ¹	3
BSCI 60144	SELECTED READINGS IN EUKARYOTIC CELL BIOLOGY	1
BSCI 60184	RESPONSIBLE CONDUCT IN RESEARCH AND TEACHING-BIOLOGICAL SCIENCES ²	2
BSCI 60199	THESIS I ³	6
BSCI 60491	SEMINAR IN PHYSIOLOGY (repeated each semester)	4-6
Major Electives ⁴		8-10
Student Seminar Presentation ⁵		
Minimum Total Credit Hours:		32

- ¹ Students may substitute a different graduate-level biochemistry or statistics course for BSCI 50142 or BSCI 60103, respectively, if deemed appropriate by the students' advisor/guidance committee.
- ² Students are required to enroll in BSCI 60184 their first semester (or the following fall semester for those starting their studies in the spring semester).
- ³ After completing 6 credit hours of BSCI 60199, students must register continually for BSCI 60299 until the degree is earned. Students begin research by successfully preparing, presenting and defending a formal prospectus for their research project to their committee. For the thesis and final defense, it is expected that students will present the results of their study in a defense open to students and faculty. The thesis must be presented and defended before the Guidance Committee with not more than one negative vote in order to be recommended to the Department of Biological Sciences and the College of Arts and Sciences for degree conferral.
- ⁴ Students are to select courses in consultation with their academic faculty advisor. It is recommended that students enroll in BSCI 50195 for selected current topics. Additional coursework should provide the necessary skills and/or knowledge base to aid in the completion of the student's research project and be beneficial for their professional development.
- ⁵ Students are required to present at least one departmental seminar about their work.

Graduation Requirement

Students must complete a minimum 14 credit hours of graded (A-F) courses toward their degree.