

# Biology, Ph.D.

## Degree Requirements

- **Credit Hours:** Students are required to complete a minimum of 38 graduate credit hours in Biology at the 400 level or above. Only 12 credit of coursework at the 400 level may be used.
- **Grade Point Average:** Students must earn a minimum cumulative GPA of 3.0 and a minimum GPA of 3.0 in courses applied to the degree.

## Curriculum Requirements

Code	Title	Hours
<b>BIOLOGY COURSEWORK:</b>		<b>18</b>
Any BIOL courses at the 400 level or above *		
<b>RESEARCH:</b>		<b>6</b>
BIOL 797	Research (Repeated) **	
<b>GRADUATE PROFESSIONAL DEVELOPMENT SEMINARS:</b>		<b>7</b>
BIOL 681	Research Project Development	
BIOL 796	Graduate Seminar (Take each fall for three years)	
BMS 700 or BMS 701	Scientific Integrity Scientific Rigor and Ethics	
BMS 720	Scientific Writing	
<b>DEPARTMENTAL COLLOQUIUM:</b>		<b>5</b>
BIOL 788	Biology Department Colloquium	
<b>TEACHING PRACTICUM:</b>		<b>2</b>
BIOL 790	Teaching Practicum	
Total Hours		<b>38</b>

\*  
Excludes BIOL 486, BIOL 490, BIOL 590, BIOL 690, BIOL 790, BIOL 794, BIOL 796, BIOL 797

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Students are expected to be involved in research throughout their graduate career, and enrollment in BIOL 797, should reflect this activity. Students must complete at least six hours, however most students complete more than 60 credit hours of research.

## Major Learning Outcomes

### BIOLOGY

The graduate programs in the Department of Biology provide rigorous training in several fields of biology. The central mission of our graduate program is to train the next generation of Biologists for careers in the field, laboratory and several other professional settings that rely on deep expertise in the biological sciences.

Students earning Ph.D. in Biology will be able to:

- Explain general and advanced biological principles as well as those specific to their research sub-discipline
- Critically evaluate and demonstrate fluency with the literature published within their field
- Independently generate testable hypotheses based on preliminary data and literature reviews
- Design and execute experiments and provide quality data, analysis and interpretation, critical to progress in their research area
- Effectively communicate their research in oral and written formats, including the ability to write and revise manuscripts suitable for publication in peer reviewed scientific journals, conference abstracts, and grant proposals
- Learn and apply the role of ethics in personal and professional behavior
- Learn and apply best laboratory practices (i.e. proper laboratory safety procedures and experimental protocols)