

# MASTER OF SCIENCE IN BIOLOGY

## Items Needed to Apply

- Online application and application fee
- Essay explaining reason for pursuing this degree program
- General GRE test scores or a passing MTEL score on the Biology, Chemistry, General Science or other science-related MTEL test.
- Two letters of recommendation from professional or academic sources
- Official transcripts from ALL colleges and universities attended showing a bachelor's degree from a regionally accredited institution in Biology, Biotechnology, Chemistry, or a similar science major
- Official transcript evaluation for any transcript from outside the United States
- An English language proficiency test if the student's academic background is not in English

## Program Requirements

Students will select one of two tracks (see below). Track I is a literature-based thesis track, while Track II is an experimental lab or field research-based track. Both tracks will require a written product (thesis or research review) and an oral defense.

Code	Title	Credits
<b>Track I (34 credits)</b>		
<i>Required Core Courses</i>		
BI-942	Biostatistical Analysis and Experimental Design	4
BI-983	Techniques in Laboratory and Field Resea	4
<i>Required Research Credits</i>		
BI-999	Biology Research Review	4
<i>Elective Courses</i> 22		
BI-917	Topics in Cell and Molecular Biology	
BI-918	Topics in Genetics and Genomics	
BI-921	Biotechnology and DNA	
BI-923	Fermentation Technology	
BI-927	Tissue Culture Techniques	
BI-930	Biological Chemistry	
BI-936	Immunology	
BI-937	Molecular Virology	
BI-938	Toxicology	
BI-941	Topics in Physiology	
BI-950	Physiological Ecology	
BI-951	Topics in Ecology and Evolution	
BI-952	Topics in Zoology	
BI-968	Cancer Biology	
BI-980	Selected Topics: Advanced Biology	
<b>Total Credits</b>		<b>34</b>

Code	Title	Credits
<b>Track II (34 credits)</b>		
<i>Required Core Courses</i>		
BI-942	Biostatistical Analysis and Experimental Design	4
BI-983	Techniques in Laboratory and Field Resea	4
<b>Total Credits</b>		<b>34</b>

### Required Research Credits

BI-996	Thesis Research I	3
BI-997	Thesis Research II	3
BI-998	Thesis Writing	3
<i>Elective Courses</i>		17

BI-917	Topics in Cell and Molecular Biology
BI-918	Topics in Genetics and Genomics
BI-921	Biotechnology and DNA
BI-923	Fermentation Technology
BI-927	Tissue Culture Techniques
BI-930	Biological Chemistry
BI-936	Immunology
BI-937	Molecular Virology
BI-938	Toxicology
BI-941	Topics in Physiology
BI-950	Physiological Ecology
BI-951	Topics in Ecology and Evolution
BI-952	Topics in Zoology
BI-968	Cancer Biology
BI-980	Selected Topics: Advanced Biology

**Total Credits** 34

### Examples of courses offered in recent years as Special Topics:

Cancer Biology  
 Biochemical Regulatory Mechanisms  
 Drug Discovery/Development  
 Mammalogy  
 Microbial Diversity  
 Genomics  
 Secondary Metabolism  
 Mycology

## Program Timeline

Timeline is based on students taking no more than 2 courses in each regular term (Fall & Spring) and no more than 1 course in each of the two Summer terms. Students must complete BI-942 and BI-983: Techniques in Laboratory & Field Research before enrolling in BI-996: Thesis Research I or BI-999: Biology Research Review.

Year One		Credits
BI-942	Biostatistical Analysis and Experimental Design	4
BI-983	Techniques in Laboratory and Field Resea	4
2-3 Electives		8-10
<b>Credits</b>		<b>16-18</b>
Year Two		Credits
BI-999	Biology Research Review (Or BI-996, BI-997 and BI-998)	1-4
2-4 Electives		8-10
<b>Credits</b>		<b>9-14</b>
<b>Total Credits</b>		<b>25-32</b>