# **MINOR: BIOLOGY**

### **Student Learning Outcomes**

Students graduating from this program will:

- · Identify fundamental concepts in the biological sciences, including the relationship between structure and function at all levels of biological organization, evolution and the role of natural selection in the process, ecological relationships between organisms and their environment.
- · Describe cellular structure and explain the major biochemical processes that occur in cells.
- · Describe and explain the mechanisms of heredity and the flow of genetic information.
- · Apply knowledge in basic mathematics, chemistry, and physics to solve biological problems.
- · Employ techniques and procedures commonly used in modern biology laboratories.
- · Analyze and critically evaluate scientific data.
- · Write clearly about topics in the biological sciences for a peer or professional audience.

## **Program Requirements**

Code       Tite       Credits         BIOLOGY 108L       General Biology I Laboratory       4         & BIOLOGY 108       and General Biology I       4         or MOTRBIOL 100LB       MOTR Essential Biology w/ Lab - Botany       4         or MOTRBIOL 150LB       MOTR Biology with Lab       6         BIOLOGY 109       General Biology II Laboratory       4         & BIOLOGY 109       General Biology with Lab       4         or MOTRBIOL 150LZ       MOTR Essential Biology with Lab       3         BIOLOGY 202       Cell Biology w/Lab       3         BIOLOGY 203       Genetics       3         Select one of the following laboratory       4       3         BIOLOGY 204       Moth Anatomy focused Essentials in Human Biology with Lab       3         BIOLOGY 205       Genetics       3         BIOLOGY 206       Genetics       3         BIOLOGY 207       Mothd is Biological Research       3         BIOLOGY 208       Methods in Biological Research       3         BIOLOGY 302.       Ecology Laboratory       3         BIOLOGY 302.       Ecology Laboratory       4         BIOLOGY 302.       Laboratory in Genetics and Developmental Biology       4         BIOLOGY 313.	<b>y</b> 1		
& BIOLOGY 108       and General Biology II         or MOTRBIOL 100LB       MOTR Essential Biology w/ Lab - Botany         or MOTRBIOL 150LB       MOTR Biology with Lab         BIOLOGY 109       General Biology II Laboratory       4         & BIOLOGY 109       General Biology with Lab       4         or MOTRBIOL 100LZ       MOTR Essential Biology with Lab       4         or MOTRBIOL 150LZ       MOTR Biology w/Lab       3         BIOLOGY 202       Cell Biology w/Lab       3         BIOLOGY 204       Generals       3         Select one of the following laboratory courses:       2-3         BIOLOGY 199L       Methods in Biological Research       3         BIOLOGY 205       Generatics       3         BIOLOGY 206       Generatics in Human Biology w/Lab       3         BIOLOGY 199L       Methods in Biological Research       3         BIOLOGY 218L       Introductory Anatomy Laboratory       3         or MOTRLIFS 100LA       MOTR Anatomy focused Human Biology w/Lab       3         BIOLOGY 302L       Ecology Laboratory       3         BIOLOGY 312L       Laboratory in Microbiology       3         BIOLOGY 313L       Laboratory in Microbiology and Cellular Ultrastructure       3         BIOLOGY 330L	Code	Title	Credits
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Upper-level Biology Majors Courses <sup>1</sup>	BIOLOGY 370L	Cell Biology Research Methods	
	BIOLOGY 338L	Comparative Vertebrate Anatomy Laboratory	
Total Credits 23-24	Upper-level Biology Majors Cou	irses <sup>1</sup>	7
	Total Credits		23-24

#### Total Credits

1

The seven hours may include any of the upper-level lab courses listed above.

### Total Biology hours:21

Standards that must be met for the minor.

- 1. Only grades of C- or better will be allowed to count toward fulfillment of the required 21 hours of biology coursework.
- 2. Students seeking a biology minor must have a minimum cumulative 2.0 UM biology GPA in courses used to fulfill the minor requirements.
- 3. At least 11 of the 21 required hours must be earned from BIOLOGY or LIFE-SCI coursework at UMKC.
- 4. At least 4 of the 7 hours of junior/senior level coursework must be earned from BIOLOGY or LIFE-SCI coursework at UMKC.