

## BACHELOR OF SCIENCE IN BIOLOGY – CELLULAR & MOLECULAR EMPHASIS, 2023-24

*For more information about policies and requirements, please see the UMKC 2023-24 Catalog.*

### FIRST YEAR

FALL SEMESTER	HOURS	SPRING SEMESTER	HOURS
BIOLOGY 108/108L General Biology I	4	BIOLOGY 109/109L General Biology II	4
CHEM 211/211L General Chemistry I	5	CHEM 212R/ 212LR General Chemistry II	5
GEFSE 101 First Semester Experience	3	ENGLISH 110 English I: Intro to Academic Prose	3
GECRT-SC Critical Thinking in Natural & Physical Sci	3	MATH 120 Precalculus	5
<b>TOTAL</b>	<b>15</b>	<b>TOTAL</b>	<b>17</b>

### SECOND YEAR

FALL SEMESTER	HOURS	SPRING SEMESTER	HOURS
BIOLOGY 202 Cell Biology	3	BIOLOGY 206 Genetics	3
CHEM 321/321L Organic Chemistry I	4	CHEM 322R/322L Organic Chemistry II	4
MATH 210 Calculus I	4	MATH 220, STAT 235, or BIOLOGY 304	3-4
LIFE-SCI 201 (recommended Major Elective)	1	ENGLISH 225 English II: Intermed Academic Prose	3
Communication Requirement (COMM-ST 110, 140, 212 or 277)	3	GECRT-SS Critical Thinking in Social & Behavioral Sciences	3
<b>TOTAL</b>	<b>15</b>	<b>TOTAL</b>	<b>17</b>

### THIRD YEAR

FALL SEMESTER	HOURS	SPRING SEMESTER	HOURS
BIOLOGY 441 Biochemistry	3	BIOLOGY 430 Molecular Bio & Genetic Engineering	3
BIOLOGY 313 Microbiology	3	BIOLOGY Laboratory Elective	2
BIOLOGY 313L OR 313WL Lab in Microbiology	3	PHYSICS 220 or 250 General Physics II OR Engineering Physics II	4
PHYSICS 210 OR 240 General Physics I OR Engineering Physics I	4	LIFE-SCI 202 (recommended Major Elective)	1
GECRT-AH Critical Thinking in Arts & Humanities	3	GECDV 201 Culture & Diversity	3
<b>TOTAL</b>	<b>16</b>	<b>TOTAL</b>	<b>13</b>

### FOURTH YEAR

FALL SEMESTER	HOURS	SPRING SEMESTER	HOURS
BIOLOGY 316 Principles of Physiology	3	BIOLOGY 498WI, LIFE-SCI 497, or LIFE-SCI 499	3
BIOLOGY 409 Developmental Biology	3	BIOLOGY 435 Immunology	3
GECUE 201 Civic & Urban Engagement	3	Constitution Requirement (HISTORY 101, 102, POL-SCI 210, CJC 364 or HON 230)	3
General Elective (300/400 level)	3	General Elective (300/400 level/WI Writing Intensive Course, if needed)	3
General Elective	3		
<b>TOTAL</b>	<b>15</b>	<b>TOTAL</b>	<b>12</b>

Additional Graduation Requirements: Civics Exam, HEIghten Exit Exam.

**Total Credits to Graduate: 120**