

BS-MS: BIOLOGY

The School of Science and Engineering established the BS-MS program to offer students an opportunity to meet the full requirements of the existing BS and MS degree programs in a shorter time period than the separate degree programs by completing a B.S. degree within four years and then completing an M.S. degree in the fifth year.

- Students admitted to the program will receive the unit BS-MS Scholarship which will cover the difference between Graduate and Undergraduate tuition rates
- Students are required to maintain full-time undergraduate enrollment (minimum 12 hours/ semester)
- Must be continuously enrolled from BS to MS programs (must enter graduate program the semester following completion of BS degree requirements, summer excepted)
- Students are required to maintain full-time enrollment (minimum 9 hours/semester) in the graduate phase of the program and complete the master's degree within a year of their bachelor's degree completion to continue to receive the BS/MS Scholarship

Admission Requirements for BS-MS Program:

Students must meet the following requirements to be eligible:

- The GRE will be waived for students who meet the qualifications above and are planning to enroll in the BS-MS program
- Students must indicate their interest and apply to the program no later than the end of their junior year
- Students must complete 30 hours at UMKC prior to admission to the BS/MS program
- Students are expected to follow the recommended curriculum (although deviations are possible) and must maintain a UMKC cumulative GPA of 3.00 or higher

This program offers students an opportunity to meet the full requirements of the existing BS and MS degree programs in a shorter time period than the separate degree programs by completing a B.S. degree in Biology within four years, and then completing an M.S. degree in Biology in their fifth year.

Requirements for Graduation

Credit Hour Requirements

The BS and MS program in Biology requires a minimum of the following:

- 120 Undergraduate Credit Hours (<http://catalog.umkc.edu/colleges-schools/science-engineering/biology/bachelor-of-science-biology/>)
- 30 Graduate Credit Hours (<http://catalog.umkc.edu/colleges-schools/science-engineering/biology/master-of-science-cellular-molecular-biology/>)
- 141 Total Credit Hours (9 Hours of Overlap taken in final year of Undergraduate Program)

For additional details, please contact our Department by e-mail sse@umkc.edu. (sce@umkc.edu)

5 Year BS-MS Map

First Year

| Fall Semester | Credits | Spring Semester | Credits |
|---------------------------|---------|--|-----------|
| BIOLOGY 108 | | 3 BIOLOGY 109 | 3 |
| BIOLOGY 108L | | 1 BIOLOGY 109L | 1 |
| CHEM 211 | | 4 CHEM 212R | 4 |
| CHEM 211L | | 1 CHEM 212LR | 1 |
| GEFSE 101 | | 3 ENGLISH 110 | 3 |
| GECRT-SC 101, 102, or 103 | | 3 GECRT-SS 101, 102, 104, 105, 106, 107, 108, or 111 | 3 |
| | | 15 | 15 |

Second Year

| Fall Semester | Credits | Spring Semester | Credits |
|---------------|---------|-----------------|---------|
| BIOLOGY 202 | | 3 BIOLOGY 206 | 3 |
| CHEM 321 | | 3 CHEM 322R | 3 |
| CHEM 321L | | 1 CHEM 322L | 1 |
| MATH 120 | | 5 MATH 210 | 4 |

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|-------------|---|---|---|
| BIOLOGY 250 | 1 | COMM-ST 110, 140, or 277 | 3 |
| ENGLISH 225 | 3 | GECRT-AH 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 112, 113, or 114 | 3 |

16 **17**

Third Year

| Fall Semester | Credits | Spring Semester | Credits |
|------------------------------------|---------|--|---------|
| BIOLOGY 441 | | 3 BIOLOGY 3XX/4XX Major Elective | 3 |
| BIOLOGY Laboratory Elective | | 2 BIOLOGY 3XX/4XX Laboratory Elective | 3 |
| BIOLOGY Major Elective | | 3 PHYSICS 220 or 250 | 4 |
| MATH 220, STAT 235, or BIOLOGY 304 | | 4 GECDV 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, or 211 | 3 |
| PHYSICS 210 | | 4 GECUE 201, 203, 204, 205, 206, or 272 | 3 |

16 **16**

Fourth Year

| Fall Semester | Credits | Spring Semester | Credits |
|--|---------|--|---------|
| BIOLOGY 498WI, LIFE-SCI 497, or LIFE-SCI 499 | | 3 BIOLOGY Undergrad Elective** | 3 |
| BIOLOGY 3XX/4XX Major Elective | | 3 BIOLOGY Undergrad Elective** | 3 |
| HISTORY 101, 102, or POL-SCI 210 | | 3 BIOLOGY Undergrad Elective** | 3 |
| General Elective | | 3 General Elective (3XX/4XX if needed) | 3 |
| General Elective | | 1 | |

13 **12**

Fifth Year

| Fall Semester | Credits | Spring Semester | Credits |
|----------------------------|---------|------------------------------|---------|
| LS-MBB 5561 | | 3 LS-MBB 5562 | 3 |
| LS-CBB 5530 | | 3 LS-CBB 5520 | 3 |
| LS-CBB 5612 | | 1 BIOLOGY Graduate Elective^ | 3 |
| BIOLOGY Graduate Elective^ | | 4 LS-MBB 5611 | 1 |

11 **10**

Total Credits: 141

** NOTE: 3 master's degree courses (9 credit hours) counted from the undergraduate curriculum for BS-MS students: Biology Undergrad Elective in Spring of 4th year

^ Graduate elective options:

Fall (cr hrs)

BIOL 5517 From Bench to Bedside (3)
 BIOL 5519 Principles of Evolution (3)
 BIOL 5525 Bioinformatics and Data Analysis (3)
 BIOL 5539 Mammalian Physiology (4)
 BIOL 5593 Master of Science Topics (research) (3)
 LS-MBB 5509 Graduate Developmental Bio (3)

Spring (cr hrs)

BIOL 5516 Global Health (3)
 BIOL 5518 Graduate Histology (3)
 BIOL 5528 Human Genomic Epidemiology (3)
 BIOL 5540 Pathophysiology (4)

BIOL 5542 Neurobiology (3)
LS-CBB 5504 Graduate Virology (3)
BIOL 5593 Master of Science Topics (research) (3)