### Suggested sequence for BS Biological Sciences with Molecular Biology Concentration

#### Freshman Year (Fall) | CR | Freshman Year (Spring) | CR
---|---|---|---
CHEM 121/R Chemistry I  | 4 | CHEM 122/R Chemistry II | 4
CHEM 121L Chemistry I Lab  | 1 | CHEM 122L Chemistry II Lab | 1
MATH 115 Calculus I | 4 | BRDG 102 Writing and Literature | 3
BRDG 101 Writing and Analysis | 3 | General Elective or math requirement | 3
BRDG 100 Research & Info Skills | 1 | 15

#### Sophomore Year (Fall) | CR | Sophomore Year (Spring) | CR
---|---|---|---
CHEM 211 Organic Chemistry I | 3 | CHEM 212 Organic Chemistry II | 3
CHEM 211L Org. Chem I Lab | 1 | CHEM 212L Org. Chem II Lab | 1
BIOL 212 Cell & Molecular Biology | 4 | BIOL 250 Genetics or other BIOL elective | 3
MATH 225 Intro to Biostatistics | 3 | MATH335 Biostats II or MATH116 Calc II | 3 (4)
EQ XXX Essential Questions Seminar | 3 | Bridges course - Cultural Fluency | 3
ENGL 302W Scientific Writing | 3 | BIOL 105 Biological Sciences Career Dev | 1
| 17 | 14-15 |

#### Junior Year (Fall) | CR | Junior Year (Spring) | CR
---|---|---|---
BIOL 370W Superlab I | 4 | BIOL ___ Superlab II (or IV or VI) | 4
PHYS 201/R Phys for Life Sci I | 3 | BIOL² or CHEM³ elective | 3
PHYS 201L Phys for Life Sci I Lab | 1 | PHYS 202/R Phys for Life Sci II | 3
BRDG 105 Intro to Ethical Reasoning | 3 | PHYS 202L Phys for Life Sci II Lab | 1
CHEM 401 Biochemistry I | 3 | Bridges course - Critical Thinking | 3
SPRG 108 Service Learning | 0-1 | BIOL 490 Biology Seminar | 1
| 14-15 | 15 |

#### Senior Year (Fall) | CR | Senior Year (Spring) | CR
---|---|---|---
BIOL 419 Bioinformatics | 3 | BIOL ____ Biology Elective² or Research | 3
BIOL 468 or other Bio Elective² | 3 | BIOL¹ or CHEM³ elective | 3
BIOL ____ Biology Elective² or Research | 3 | Bridges course - Ethical Reasoning | 3
Bridges course - Social & Historical Reasoning | 3 | General elective or Biology elective | 3
General elective or Biology elective | 3 | 12
| 15 |

**TOTAL = 122 CREDITS**

¹Students may opt for either MATH 116 or MATH 335.
²BIOL electives may be chosen from any concentration. The following electives are suggested based on a significant cell/molecular component. Students in this track are not required to take a Supra-Organismal course.

- BIOL 310 Biomolecular Structure & Function
- BIOL 313 Developmental Biology
- BIOL 319 General Microbiology
- BIOL 332 Virology
- BIOL 405 Microbial Genetics
- BIOL 424 Immunology
- BIOL 460 Endocrinology
- BIOL 475 Neurobiology
- BIOL 426 Pathogenic Microbiology
- BIOL 250/468 Genetics/Human Genetics*

*One of these courses is required; the other may be taken as elective credit.
CHEM 402  Biochemistry II*
*If taking this, it should ideally be in the spring of year 3, following CHEM 401.

Science/Service Learning (SPRG 108) should taken for 1 credit anytime during junior/senior year.
Biology Seminar (BIOL 490) should be taken anytime during junior/senior year.
Science Writing (ENGL 302W) is recommended before Superlab I (BIOL 370W).

Undergraduate research is recommended but not required. The following courses related to undergraduate research and an Honors Thesis (an option for some students) earn elective credit:
- BIOL 398/399/415H  Undergraduate Research/Honors Research (maximum of 6 credits)
- BIOL 394  Biology Research Forum (1 credit for students engaged in research)

The following CHEM courses (in addition to 402) are possible as elective credits:
- CHEM 301  Physical Chemistry for Life Sciences
- CHEM 510  Bioanalytical Chemistry

Notes:
A minimum grade of C in BIOL 115, 117, and 212 is a prerequisite for all advanced Biological Sciences courses.
Students must maintain an overall grade point average of 2.00 or better to remain enrolled in BSNES.
Students must maintain a grade point average of 2.00 in Biological Sciences courses to graduate.

BRDG courses can be taken in any sequence throughout the undergraduate curriculum.

**This curriculum sheet is subject to change.  Revised 8/21