

Major Program Guide For: B.S. in Biology¹ Concentration: Cell and Molecular Biology Suggested Course Sequence

Freshman Year

| Fall | | | | Spring | | | |
|--------------------------------------|---------------|-------------------------------|-------|---------------------------------|---------------|-------------------------------|-------|
| Course Prefix or LS Requirement | Course Number | Course Title | Hours | Course Prefix or LS Requirement | Course Number | Course Title | Hours |
| BIOL | 140 | Principles of Biology I | 4 | BIOL | 141 | Principles of Biology II | 4 |
| CHEM | 139 | General Chemistry I | 4 | CHEM | 140 | Advanced General Chemistry | 4 |
| ENGL | 101 | Composition I | 3 | COMM | 201 | Intro to Speech Communication | 3 |
| HEAL or HSCC ² (Wellness) | | choose from a list of options | 3 | P5 (Fine & Performing Arts) | | choose from a list of options | 3 |
| First Year Seminar | 190 | | 3 | P6 (World Cultures) | | choose from a list of options | 3 |
| BIOL | 180 | Intro to Biol Research | 1 | | | | |
| | | | 18 | | | | 17 |

Sophomore Year

| Fall | | | | Spring | | | |
|---------------------------------|------------------|-----------------------------|-------|---------------------------------|---------------|-----------------------|-------|
| Course Prefix or LS Requirement | Course Number | Course Title | Hours | Course Prefix or LS Requirement | Course Number | Course Title | Hours |
| BIOL | 240 | Genetics | 4 | BIOL | 241 | Ecology & Evolution | 4 |
| CHEM | 241 | Organic Chemistry I | 4 | CHEM | 242 | Organic Chemistry II | 4 |
| MATH | 146 ³ | Precalculus | 4 | MATH | 153 | Calculus I | 4 |
| P3 (History) | | choose from list of options | 3 | P1 (Social Science) | | PSY 150 (recommended) | 3 |
| ENGL | 202 | Composition II | 3 | | | | |
| | | | 18 | | | | 15 |

Junior Year

| Fall | | | | Spring | | | |
|---------------------------------|---------------|----------------------------|-------|---------------------------------|---------------|------------------------|-------|
| Course Prefix or LS Requirement | Course Number | Course Title | Hours | Course Prefix or LS Requirement | Course Number | Course Title | Hours |
| BIOL | 333 | Cell and Molecular Biology | 3 | BIOL | 419 | Cell Biology | 4 |
| BIOL | 361 | Principles of Biochemistry | 3 | BIOL | | Jr-Sr Biology Elective | 4 |
| PHYS | 130 | Physics I | 4 | PHYS | 131 | Physics II | 4 |
| P1 (Social Science) | | SOCW 354 recommended | 3 | P4 (Humanities) | | PAR 332 (recommended) | 3 |
| | | | 13 | | | | 15 |

Senior Year

| Fall | | | | Spring | | | |
|---------------------------------|------------------|------------------------------|-------|---------------------------------|---------------|------------------------|-------|
| Course Prefix or LS Requirement | Course Number | Course Title | Hours | Course Prefix or LS Requirement | Course Number | Course Title | Hours |
| BIOL | 496 ⁵ | Biology Departmental Seminar | 1 | BIOL | | Jr-Sr Biology Elective | 3-4 |
| BIOL | | Jr-Sr Biology Elective | 4 | BIOL | | Jr-Sr Biology Elective | 3-4 |
| BIOL | | Jr-Sr Biology Elective | 3-4 | General Elective | | | 3-4 |
| General Elective ⁶ | | | 3-4 | General Elective | | | 3-4 |
| General Elective | | | 3-4 | | | | |
| | | | 14-17 | | | | 12-16 |

Notes:

- Total number of credit hours for the program: 120.
- There is great flexibility in scheduling Liberal Studies (LS) courses, but most other freshman/sophomore courses must be taken in numerical sequence to satisfy prerequisites. For example, BIOL 140 is a prerequisite for BIOL 141, which is a prerequisite for BIOL 240; MATH 146 is a prerequisite for MATH 153; and CHEM 140 is a prerequisite for CHEM 241, which is a prerequisite for CHEM 242.
- MATH 146 (Pre-calculus) is not required by the Biology BS degree, but is a prerequisite for MATH 153 (Calculus I). This four-credit course is the only prerequisite course in the Biology BS program that is not also required for the major.
- All students are required to take one upper-level perspectives (ULP), LS course. Any junior/senior level LS course will satisfy this requirement, but we recommend PAR 332 or PAR 333 because either will satisfy three requirements: Humanities, ULP, and 3 hours of upper level biology elective credit.
- "Biology Departmental Seminar" can be taken starting sophomore year.
- All biology majors are strongly advised to take at least one semester of statistics. We recommend Biostatistics (BIOL 467), Statistical Methods I (MATH 270), or Statistical Methods II (MATH 375).