# ACADEMIC PLANNING GUIDE - MOLECULAR BIOLOGY

Effective with 2018-2019 Catalog

## MAJOR REQUIREMENTS

<table>
<thead>
<tr>
<th>Required Semester Hours</th>
<th>B.A.: 36 semester hours + 16 prerequisite semester hours</th>
<th>B.S.: 42 semester hours + 24 prerequisite semester hours</th>
</tr>
</thead>
</table>

### Prerequisites and Supporting Courses:

**B.A. Degree: 16 semester hours**
- CHEM 1021/1031: Survey of Organic Chemistry (2) / Survey of Biochemistry (2) or CHEM 2310: Organic Chemistry I (4)
- PHEN 1110: College Physics I (4) or PHEN 1210: Introduction to Physics I (4)
- CHEM 1150: Introduction to Chemistry I (4) - meets Physical Science Requirement
- CHEM 1160: Introduction to Chemistry II (4)

**B.S. Degree: 24 semester hours**
- PHEN 1110: College Physics I (4) or PHEN 1210: Introduction to Physics I (4)
- CHEM 1150: General Chemistry I (4) - meets Physical Science requirement
- CHEM 1160: General Chemistry II (4)
- CHEM 2310: Organic Chemistry I (4)
- CHEM 2320: Organic Chemistry II (4)
- CHEM 3330: Introduction to Biochemistry (4)

### Required Core Courses:

- BIOL 1260: Introduction to Cell Biology (4) - meets Writing Intensive Course requirement
- BIOL 2910: Microbiology (4)
- BIOL 3050: Biotechnology (4)
- BIOL 3210: Genetics (4)
- BIOL 3230: Molecular Biology (4)
- BIOL 3290: Bioinformatics (2)
- BIOL 4901: Comprehensive Examination (0)
- B.S. Only: BIOL 4930: Directed Research or BIOL 4970: Internship (4)

### Elective Courses:

**B.A. Degree:**
- 14 semester hours of Biology courses 2100 or above, including at least two courses from group A and one from group B

**Group A**
- BIOL 3140: Histology (4), BIOL 3510: Embryology (4), BIOL 3610: Medical Microbiology (2), Biol 3620: Immunology (2), BIOL 2930: Physiology (4), BIOL 4950-Molecular Biology Techniques in Field Biology

**B.S. Degree:**
- 20 semester hours of Biology courses 2100 or above, including at least two courses from group A and one from group B.

**Group B**
- BIOL 2270: Introduction to Zoology (4), BIOL 2280: Introduction to Botany (4) - both meet Research Writing Course requirement

### Notes:
- No more than a total of 8 sh of BIOL 2100 or BIOL 4020 can apply to the major.
- Students must take a national biology comprehensive exam (BIOL 4901) during their last semester of full-time enrollment.
- Biology Internship (BIOL 4970) and Directed Research (BIOL 4930) requires a GPA of 3.00 in biology courses at North Park.
- Students are strongly advised to take MATH 1490: Statistics for B.A. and MATH 1510: Calculus for B.S.
- Students are strongly advised to take BIOL 3010: Ethics in Biology

The Academic Planning Guide is designed as a guide for students planning their course selections. The information on this page provides only a suggested schedule. Actual course selections should be made with the advice and consent of a faculty advisor. While accurately portraying the information contained in the college catalog, this form is not considered a legal substitute for that document. Students should become familiar with the catalog in effect at the time in which they entered the institution.
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### CORE CURRICULUM

Starting with the framework of North Park’s identity as a Christian, liberal arts institution, our Core Curriculum is intentionally multi-disciplinary and multi-year. It is set up as a progress through three areas: Foundation Courses, Explorations Courses, and Capstone Courses.

[http://www.northpark.edu/Academics/Undergraduate-Studies/Core-Curriculum](http://www.northpark.edu/Academics/Undergraduate-Studies/Core-Curriculum)

<table>
<thead>
<tr>
<th><strong>Foundations</strong></th>
<th><strong>Explorations</strong></th>
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<tbody>
<tr>
<td>Cornerstone Seminar (4sh)</td>
<td>Art and Aesthetics (2sh)</td>
</tr>
<tr>
<td>Biblical Studies (4sh)</td>
<td>Christian Life &amp; Thought (4sh)</td>
</tr>
<tr>
<td>Health and Well-Being (2sh)</td>
<td>Life Science (2sh/lab)</td>
</tr>
<tr>
<td>Analytical &amp; Quantitative Reasoning (4sh)</td>
<td>Physical Science (2sh/lab)</td>
</tr>
<tr>
<td>Global Histories (4sh)</td>
<td>Culture and Society (4sh)</td>
</tr>
<tr>
<td>Modern Languages (8sh)</td>
<td>Ethical Reasoning (2sh)</td>
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### Intermediate Level Writing

Two courses in the context of your major that specifically address writing clearly and doing effective research

- Writing Intensive Course (4sh) *met by BIOL 1260*
- Research Writing Course (4sh) *met by either BIOL 2270 or BIOL 2280*

### Keystone

Interdisciplinary integration of skills and knowledge applied to contemporary social issues

- Keystone Seminar (4sh)

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