## MOLECULAR BIOLOGY (M.S.)

### Program Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 547</td>
<td>Molecular Biology I</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 548</td>
<td>Molecular Biology II</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 556</td>
<td>Molecular Biology of Proteins</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 592</td>
<td>Graduate Colloquium</td>
<td>1</td>
</tr>
</tbody>
</table>

**Research in Biological Literature**

| BIOL 597 | Research in Biological Literature | 1       |

**Electives and Culminating Activity**

**Concentration/Specialization Courses**

Select 14 credits (if completing a thesis) - 17 credits (if completing BIOL 599 or a Lab course) from the following:

**Biology Electives**

- BIOL 505: Experimental Cell Culture
- BIOL 512: Topics in Modern Genetics
- BIOL 513: Instrumentation and Techniques for Biological Science
- BIOL 515: Population Genetics
- BIOL 520: Plant Physiology
- BIOL 533: Advanced Cell Biology
- BIOL 540: Mammalian Physiology
- BIOL 549: Topics in Developmental Biology
- BIOL 550: Topics in Microbiology
- BIOL 551: Intermediary Metabolism I
- BIOL 552: Biology of Lipids
- BIOL 555: Medical Genetics
- BIOL 557: Virology
- BIOL 558: Micrbiol Genetics
- BIOL 560: Molecular Genetics
- BIOL 561: Genomics
- BIOL 562: Short Topics in Molecular Biology
- BIOL 563: Statistical Genomics
- BIOL 564: Proteomics
- BIOL 565: Advanced Plant Molecular Genetics
- BIOL 566: Bioinformatics
- BIOL 568: Advanced Neuroscience
- BIOL 587: Selected Advanced Topics in Molecular Biology
- BIOL 593: Molecular Ecology
- BIOL 594: Signal Transduction
- BIOL 598: Selected Techniques in Molecular Biology

**Non-Departmental Approved Electives**

0-9 credits may be completed from the following:

- CHEM 570: Advanced Biochemistry
- CHEM 575: Enzyme Kinetics and Mechanisms
- CHEM 577: Nucleic Acid Biochemistry
- CHEM 578: Biochemistry Laboratory Techniques
- CHEM 579: Biomolecular Assay Development
- CHEM 582: Biochemical Pharmacology

**Culminating Activity**

Select one of the following options:

- **Thesis**
  - BIOL 698: Master’s Thesis
  - Complete BIOL 698 for 6 credits. Submit the completed Thesis original and one copy to the Graduate Office. See Thesis Guidelines for details.

- **Non-Thesis Research Option**
  - BIOL 599: Introduction to Biological Research
  - Complete BIOL 599 for 4 credits. Present a research summary to a committee of 3 faculty members. Results are reported to the Graduate School.

- **Non-Thesis Lab Option**
  - Complete a Laboratory Course for 3-4 credits with approval from graduate advisor.
  - Present a research summary to a committee of 3 faculty members. Results are reported to the Graduate School.

**Total Credits** 32