# 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

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 597</td>
<td>Research in Biological Literature</td>
<td>1</td>
</tr>
</tbody>
</table>

### 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 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 552 Biology of Lipids
- BIOL 555 Medical Genetics
- BIOL 557 Virology
- BIOL 558 Microbial Genetics
- BIOL 560 Molecular Genetics
- BIOL 561 Genomics
- BIOL 562 Short Topics in Molecular Biology
- BIOL 563 Statistical Genomics
- BIOL 564 Proteomics
- 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: 3-6

- 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