# Molecular Biology (M.S.)

## Program Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<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>
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### Research in Biological Literature

<table>
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<tr>
<th>Code</th>
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<tbody>
<tr>
<td>BIOL 597</td>
<td>Research in Biological Literature</td>
<td>1</td>
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### Electives and Culminating Activity

#### Concentration/Specialization Courses

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

**Biology Electives**

- BIOL 505 Experimental Cell Culture
- BIOL 512 Special Topics in Modern Genetics
- BIOL 515 Population Genetics
- BIOL 520 Plant Physiology
- BIOL 533 Advanced Cell Biology
- BIOL 540 Mammalian Physiology
- BIOL 549 Special Topics in Developmental Biology
- BIOL 550 Special 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 Special Topics in Molecular Biology
- BIOL 563 Statistical Genomics
- BIOL 564 Proteomics
- BIOL 566 Bioinformatics
- BIOL 568 Advanced Neuroscience
- BIOL 587 Special Topics in Advanced 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