# 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>
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<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>
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## Research in Biological Literature

<table>
<thead>
<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 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