# MOLECULAR BIOLOGY (M.S.)

## Program Requirements

### Core Courses
- BIOL 547 Molecular Biology I 3
- BIOL 548 Molecular Biology II 4
- BIOL 556 Molecular Biology of Proteins 3
- BIOL 592 Graduate Colloquium 1

### 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 Microbial 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: 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