Biology (M.S.)

For details about this program, including program description, admission requirements, and contact information, click here (https://www.montclair.edu/graduate/programs-of-study/biology-ms/).

Program Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 520</td>
<td>Plant Physiology</td>
<td>3</td>
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<tr>
<td>or BIOL 540</td>
<td>Mammalian Physiology</td>
<td></td>
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<tr>
<td>BIOL 547</td>
<td>Molecular Biology I</td>
<td>3</td>
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<tr>
<td>BIOL 570</td>
<td>Ecology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 597</td>
<td>Research in Biological Literature</td>
<td>1</td>
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</tbody>
</table>

Electives and Culminating Experience

Biology Areas of Emphasis

Select 16-19 credits from the following: 1

- BIOL 500 Introductory Molecular Cell Biology
- BIOL 510 Biology Pedagogy for Secondary Teachers
- BIOL 512 Special Topics in Modern Genetics
- BIOL 514 Graduate Seminar in Biology
- BIOL 518 Strategies for Teaching College Biology
- BIOL 520 Plant Physiology
- BIOL 521 Field Studies of Flowering Plants
- BIOL 529 Advanced Herpetology
- BIOL 532 Advanced Entomology
- BIOL 533 Advanced Cell Biology
- BIOL 540 Mammalian Physiology
- BIOL 542 Advanced Endocrinology
- BIOL 543 Advances in Immunology
- BIOL 544 Advanced Comparative Animal Physiology
- BIOL 545 Experimental Endocrinology
- BIOL 546 Special Topics in Physiology Special Topics in Physiology
- BIOL 548 Molecular Biology II
- BIOL 549 Special Topics in Developmental Biology
- BIOL 550 Special Topics in Microbiology
- BIOL 552 Biology of Lipids
- BIOL 554 Microbial Physiology
- BIOL 555 Medical Genetics
- BIOL 556 Molecular Biology of Proteins
- BIOL 557 Virology
- BIOL 558 Microbial Genetics
- BIOL 560 Molecular Genetics
- BIOL 571 Physiological Plant Ecology
- BIOL 574 Behavioral Ecology
- BIOL 576 Biology of Extreme Habitats
- BIOL 579 Physiological Ecology of Animals
- BIOL 580 Evolutionary Mechanisms
- BIOL 586 Special Topics in Advanced Biology
- BIOL 592 Graduate Colloquium
- BIOL 593 Molecular Ecology
- BIOL 594 Signal Transduction
- BIOL 595 Conservation Biology: The Preservation of Biological Diversity
- BIOL 596 Selected Techniques in Biology Science Education
- BIOL 598 Selected Techniques in Molecular Biology
- BIOL 572 Wetland Ecology
- BIOL 573 Shoreline Ecology

0-4 credits from the following may be used:

- CHEM 530 Advanced Organic Chemistry
- CHEM 532 Organic Synthesis
- CHEM 570 Advanced Biochemistry
- EAES 505 Environmental Geoscience
- EAES 526 Geochemistry
- EAES 545 Paleooecology
- EAES 550 Advanced Marine Geology

0-6 credits from the following may be taken with advisor approval:

- CHEM 530 Advanced Organic Chemistry
- CHEM 532 Organic Synthesis
- CHEM 570 Advanced Biochemistry
- EAES 505 Environmental Geoscience
- EAES 526 Geochemistry
- EAES 545 Paleooecology
- EAES 550 Advanced Marine Geology

Thesis or Non-Thesis Option

Select one of the following:

- Thesis Option
  - BIOL 698 Master’s Thesis
  - Submit the completed Thesis original and one copy to the Graduate Office. See Thesis Guidelines for details.
- Research or Lab/Field Course Option
  - BIOL 599 Introduction to Biological Research 2
  - GRAD CMP Comprehensive Examination
  - In the term that you will sit for exam, register for the section which matches your major & advisor. Successfully pass exam.

Total Credits: 32

1 BIOL 514 is recommended.
2 Or Biology/Lab Field course approved by Graduate Program Coordinator.