# Mathematical Biology Minor

## Minor Requirements (22 Hours)

### Prerequisites

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 141</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MATH 142</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>MATH 241</td>
<td>Vector Calculus</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Required Math Prerequisites: 1

#### Required Science Prerequisites: 2

Select two of the following:

- BIOL 101  Biological Principles I
- BIOL 101L Biological Principles I Laboratory
- BIOL 102  Biological Principles II
- BIOL 102L Biological Principles II Laboratory
- MSCI 101  The Ocean Environment
- MSCI 102  The Living Ocean

### Other Requirements: 3

Select one of the following:

- BIOL 301  Ecology and Evolution
- BIOL 303  Fundamental Genetics
- MSCI 314  Physical Oceanography

## Courses for the Minor (19 Hours)

#### Linear Algebra (4 Hours)

Select one of the following:

- MATH 344  Applied Linear Algebra
- MATH 344L Applied Linear Algebra Lab

or

- MATH 544  Linear Algebra
- MATH 544L Linear Algebra Lab

### Differential Equations (6 Hours)

Select two of the following:

- MATH 242  Elementary Differential Equations
- MATH 520  Ordinary Differential Equations
- MATH 521  Boundary Value Problems and Partial Differential Equations

### Additional Courses (9 Hours)

Select three of the following:

- MATH 520  Ordinary Differential Equations (if not selected above)
- MATH 521  Boundary Value Problems and Partial Differential Equations (if not selected above)
- BIOL 552  Population Genetics
- MSCI 552  Population Genetics
- BIOL 652  Evolutionary Biology
- BMEN 212  Fundamentals of Biomedical Systems
- BMEN 240  Cellular and Molecular Biology with Engineering Applications
- BMEN 263  Introduction to Biomechanics
- BMEN 290  Thermodynamics of Biomolecular Systems
- BMEN 391  Kinetics in Biomolecular Systems
- MATH 523  Mathematical Modeling of Population Biology
- MSCI 582  Marine Hydrodynamics

**Total Credit Hours**

- 22
- 9

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1. Fulfills Carolina Core ARP Requirement

Minor courses cannot be counted toward student's major.