Marine Sciences Minor

Contact Information
Department of Marine Sciences
Visit Program Website (http://www.marine.unc.edu)
3202 Venable and Murray Halls, CB# 3300
(919) 962-1252

Harvey Seim, Chair
Brent Mckee, Chair (2018-2019)
Marc Alperin, Director of Undergraduate Studies
alperin@email.unc.edu
Violet Anderson, Student Services Manager
vmanders@email.unc.edu

The minor in marine sciences is designed to allow students access to departmental courses, facilities, and advisors in order to develop marine specializations related to their majors and to prepare for postgraduate study in marine sciences or a related field.

Requirements
In addition to the program requirements listed below, students must:

- take at least nine hours of their minor course requirements at UNC–Chapel Hill
- earn a minimum of 12 hours of C or better in the minor (some minors require more)

For more information, please consult the degree requirements section of the catalog (http://catalog.unc.edu/undergraduate/general-education-curriculum-degree-requirements/#degreerequirementstext).

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core Requirements</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MASC 101</td>
<td>The Marine Environment</td>
<td>3</td>
</tr>
<tr>
<td>or MASC 4010Oceanography</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENEC 222</td>
<td>Estuarine and Coastal Marine Science</td>
<td>3</td>
</tr>
<tr>
<td>MASC 55</td>
<td>First-Year Seminar: Change in the Coastal Ocean</td>
<td></td>
</tr>
<tr>
<td>MASC 58</td>
<td>First-Year Seminar: Connections to the Sea: The Challenges Faced by Using and Living near Coastal In</td>
<td></td>
</tr>
<tr>
<td>MASC/ENEC 220</td>
<td>North Carolina Estuaries: Environmental Processes and Problems</td>
<td></td>
</tr>
<tr>
<td>MASC/GEOL 223</td>
<td>Geology of Beaches and Coasts</td>
<td></td>
</tr>
<tr>
<td>MASC/ENEC/GEOL 411</td>
<td>Oceanic Processes in Environmental Systems</td>
<td></td>
</tr>
<tr>
<td>MASC 432</td>
<td>Major World Rivers and Global Change: From Mountains to the Sea</td>
<td></td>
</tr>
<tr>
<td>MASC/ENEC 433</td>
<td>Wetland Hydrology</td>
<td></td>
</tr>
<tr>
<td>MASC 440/BIOL 462</td>
<td>Marine Ecology</td>
<td></td>
</tr>
<tr>
<td>MASC 442/BIOL 457</td>
<td>Marine Biology</td>
<td></td>
</tr>
<tr>
<td>MASC/ENEC 448</td>
<td>Coastal and Estuarine Ecology</td>
<td></td>
</tr>
<tr>
<td>MASC/ENEC 471</td>
<td>Human Impacts on Estuarine Ecosystems</td>
<td></td>
</tr>
<tr>
<td>MASC 472</td>
<td>Barrier Island Ecology and Geology</td>
<td></td>
</tr>
<tr>
<td>MASC/GEOL 503</td>
<td>Marine Geology</td>
<td></td>
</tr>
<tr>
<td>MASC 504/BIOL 657/ENVR 520</td>
<td>Biological Oceanography</td>
<td></td>
</tr>
<tr>
<td>or an equivalent course with a focus on the coastal ocean and approved by the director of undergraduate studies</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

One course featuring practical experience in marine sciences. Choose one from the following four groups:

**Group 1:**
- ENEC 222 Estuarine and Coastal Marine Science
- MASC 52 First-Year Seminar: Living with Our Oceans and Atmosphere
- MASC/ENEC 220 North Carolina Estuaries: Environmental Processes and Problems
- MASC/GEOL 223 Geology of Beaches and Coasts
- MASC 432 Major World Rivers and Global Change: From Mountains to the Sea
- MASC/ENEC 448 Coastal and Estuarine Ecology
- MASC/ENEC 471 Human Impacts on Estuarine Ecosystems
- MASC 472 Barrier Island Ecology and Geology
- MASC/GEOL 503 Marine Geology
- MASC 504/BIOL 657/ENVR 520 Biological Oceanography
- or an equivalent field course approved by the director of undergraduate studies

**Group 2:**
- MASC/ENEC/GEOL 415 Environmental Systems Modeling
- MASC/GEOL/ENVR 480 Modeling of Marine and Earth Systems
- MASC/GEOL 483 Geologic and Oceanographic Applications of Geographical Information Systems
- MASC 561 Time Series and Spatial Data Analysis
- or an equivalent mathematical modeling or data analysis course approved by the director of undergraduate studies

**Group 3:**
- MASC/ENEC 444/BIOL 456 Marine Phytoplankton
- MASC 445 Marine Invertebrate Biology
- or an equivalent laboratory course approved by the director of undergraduate studies

**Group 4:**
- MASC 395 Undergraduate Research in Marine Sciences
- or MASC 399 Independent Study in Marine Sciences

A marine sciences course of the student’s choosing 3

Total Hours 12
Students may receive credit only for one of MASC 101 or MASC 401. Marine sciences (MASC) course descriptions [can be found](http://catalog.unc.edu/undergraduate/departments/marine-sciences/#coursestext).

## Special Opportunities in Marine Sciences

### Undergraduate Research

The department offers opportunities to undergraduates to conduct directed research in our laboratories. Students work directly with faculty members and may enroll for credit as part of an honors or research project. The liaison for undergraduate research provides information about research opportunities in marine sciences, and assists undergraduates in finding a faculty advisor/research group that matches their interests.

### Experiential Education

There are three opportunities for experiential education in the Department of Marine Sciences:

- **MASC 220** is taught during Maymester at the main campus with one week at the UNC-Chapel Hill Institute of Marine Sciences in Morehead City, NC.
- **MASC 395** can be taken with the permission of a faculty advisor.
- **MASC 472** is taught at the UNC-Chapel Hill Institute of Marine Sciences in Morehead City, NC, during the summer session and provides an experience in the field.