OCEAN ENGINEERING: OCEAN MAPPING (M.S.)

https://ceps.unh.edu/ocean-engineering/program/ms/ocean-engineering-ocean-mapping

Description

The MS option in ocean mapping is offered in conjunction with the Joint Hydrographic Center/Center for Coastal and Ocean Mapping. Students follow a more structured path through this program, which incorporates all aspects of hydrography as required by the International Hydrographic Organization (IHO).

Students may also fulfill the Category A (professional) International Federation of Surveyors/International Hydrographic Organization/International Cartographic Association (FIG/IHO) Standards of Competence for Hydrographic Surveyors by completing specialized requirements in addition to the MS-option program requirements. More information is available on the Center for Coastal and Ocean Mapping website.

Requirements

Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>OE 990</td>
<td>Ocean Seminars I</td>
<td>2</td>
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<tr>
<td>&amp; OE 991</td>
<td>Ocean Seminars II</td>
<td></td>
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<tr>
<td>ESCI 820</td>
<td>Ocean Measurements Lab</td>
<td>4</td>
</tr>
<tr>
<td>OE 865</td>
<td>Underwater Acoustics</td>
<td>3</td>
</tr>
<tr>
<td>OE 871</td>
<td>Geodesy and Positioning for Ocean Mapping</td>
<td>4</td>
</tr>
<tr>
<td>OE 874</td>
<td>Integrated Seabed Mapping Systems</td>
<td>4</td>
</tr>
<tr>
<td>OE 875</td>
<td>Advanced Topics in Ocean Mapping</td>
<td>4</td>
</tr>
<tr>
<td>OE 972</td>
<td>Hydrographic Field Course</td>
<td>4</td>
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</tbody>
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Electives

Select at least 3 additional credits from the following courses:

OE 854   Ocean Waves and Tides
OE 857   Coastal Engineering and Processes
OE 864   Spectral Analysis of Geophysical Time Series Data
OE 895   Special Topics
ECE 814  Introduction to Digital Signal Processing
ESCI 858 Introduction to Physical Oceanography
ESCI 868 Applied Physical Oceanography for Hydrographic Surveyors
ESCI 869 Marine Geology and Geophysics for Hydrographic Surveyors
ESCI 896 Topics

Thesis Requirement

OE 899   Master's Thesis                     6

Total Credits 34-35

Student Learning Outcomes

Students graduating with a MS or MEng in Ocean Engineering should be able to:

- Rigorously apply fundamentals of science and engineering to professional practice that enhances our understanding of and/or contributes to the sustainable development of the oceans.
- Contribute their ocean engineering problem solving skills to society through participation and leadership in groups dedicated to serving both professional associations and the public interest.