OCEAN ENGINEERING: OCEAN MAPPING (M.S.)

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

Description

Ocean Mapping Option

This option 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).

Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<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>and Ocean Seminars II</td>
<td></td>
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<tr>
<td>ESCI 820</td>
<td>Ocean Measurements Lab</td>
<td>4</td>
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<tr>
<td>OE 866</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>
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<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>
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<tr>
<td>OE 972</td>
<td>Hydrographic Field Course</td>
<td>4</td>
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Select at least 3 additional credits from the following electives: 3-4

- 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

Complete a master’s thesis for 6 credits

DE 899 Master’s Thesis 6

Total Credits 34-35

Students may 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, in addition to the core courses, some additional specialized requirements. For more information, please visit the Center for Coastal and Ocean Mapping website.

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.

- Use their ocean engineering graduate education for success in technical careers in industry, academia, government, or for advanced ocean-related research in engineering and the physical sciences.