MATERIALS SCIENCE (M.S.)

https://ceps.unh.edu/materials-science/program/ms/materials-science

Description

We offer degrees to qualified students interested in interdisciplinary research with an emphasis on the synthesis, characterization and utilization of nanoscale materials. All MSP students learn about the interplay of structure, processing, characterization, and properties of materials with useful applications. Our seventeen faculty members are active collaborators with research and development groups located around the world, and are experienced in managing research projects with practical results. Graduates of our program work in research, engineering and process development positions in a variety of fields.

Requirements

M.S. Degree Requirements

The Master's Thesis Option requires a total of 30 credits, which include 24 course credits and 6 thesis credits (MS 899 Master's Thesis). At least 6 credits must be at the 900 level.

The Master's Project Option also requires a total of 30 credits, which includes 27 course credits and 3 project credits (MS 898). The project may be theoretically or experimentally based but will be significantly less intensive than a thesis. The project will be defined and evaluated by the student's advisor. At least 6 credits of coursework must be at the 900 level. The remaining course requirements are the same as that of the Master's Thesis Option.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MS 960</td>
<td>Thermodynamics and Kinetics of Materials I</td>
<td>3</td>
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<tr>
<td>MS 961</td>
<td>Thermodynamics and Kinetics of Materials II</td>
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Select one course each satisfying the following areas:

- Synthesis and processing
- Characterization
- Structure-property relationships
- MS 900 Seminar (two semesters)

Select one of the following:

- **Thesis Option:**
  - MS 899 Master's Thesis (6 credits)
  - Select one additional elective

- **Project Option:**
  - MS 898 (3 credits)
  - Select two additional electives

All students are expected to take at least 6 course credits at the 900 level. Students who have done graduate work at other schools that included courses similar to those in the Materials Science Program may petition for waivers of UNH degree requirements. Other courses that may count as electives in the Materials Science Program are taught by faculty in chemistry, mechanical engineering, physics, and other departments. For a complete list of these courses, please see the Graduate Student Handbook on the materials science website.

Student Learning Outcomes

- Students will understand the nature of the atomic-level structures found in metals, ceramics, polymers and semiconductors.