MATERIALS SCIENCE GRADUATE MAJOR (MS, PHD)

The discipline of materials science is inherently interdisciplinary, involving fundamental aspects of engineering, chemistry, physics, biology, geoscience, and mathematics.

Reflecting this characteristic, the Materials Science Program at Oregon State University, initiated in the 1980s, involves over 60 tenured and tenure-track faculty members spanning the OSU Colleges of Engineering, Science and Forestry. This allows students to earn MS and PhD degrees in Materials Science in many different areas of concentration, including all classes of materials over a wide spectrum of materials behavior. The coursework requirements are extremely flexible to allow students to tailor their program of study to directly support their research activities.

For more information, visit the website (http://matsci.oregonstate.edu), or contact the Materials Science Graduate Program, School of Mechanical & Industrial Engineering, info-mime@oregonstate.edu, 541-737-3441.

Major Code: 3200

MS

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<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Mats 570</td>
<td>STRUCTURE-PROPERTY RELATIONS IN MATERIALS</td>
<td>4</td>
</tr>
<tr>
<td>Mats 581</td>
<td>THERMODYNAMICS OF SOLIDS</td>
<td>4</td>
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Core Curriculum
Select 2 courses from the following:

Mats 571 | ELECTRONIC PROPERTIES OF MATERIALS
Mats 582 | RATE PROCESSES IN MATERIALS
Mats 584 | ADVANCED FRACTURE OF MATERIALS
Mats 588 | COMPUTATIONAL METHODS IN MATERIALS SCIENCE

Characterization Requirement
Select at least 1 course from the following:

Ch 616 | CRYSTALLOGRAPHY AND X-RAY DIFFRACTION
Mats 555 | EXPERIMENTAL TECHNIQUES IN MATERIAL SCIENCE
Mats 659 | PRINCIPLES OF TRANSMISSION ELECTRON MICROSCOPY
OC 528 | MICROPROBE ANALYSIS

Processing Requirement
Select at least 1 course from the following:

Ch 611/ECE 611 | ELECTRONIC MATERIALS PROCESSING
ECE 518 | SEMICONDUCTOR PROCESSING
Mats 545 | WELDING METALLURGY
Mats 578 | THIN FILM MATERIALS CHARACTERIZATION AND PROPERTIES
WSE 535 | POLYMER SYNTHESIS AND STRUCTURE

Electives
Chosen by student, as approved by their major professor

Seminar
ME 507 | SEMINAR 1 maximum 3

Thesis
XXX 603 THESIS 2

Total Hours
45

PhD

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Electives
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Seminar
ME 507 | SEMINAR 1 maximum 3

Thesis
XXX 603 THESIS 2

Total Hours
108

1 At least one credit of ME 507 must be the section titled "Materials Science Seminar"
2 XXX represents the subject area that corresponds to the major professor's academic area (eg. ME 503 for MS or ME 603 for PhD)

Major Code: 3200