**MATERIALS SCIENCE MINOR**

Materials Science is a unique blend of disciplines spanning engineering, science, and forestry at OSU.

The Materials Science minor is aimed at students with a wide range of materials-related interests including composites, ceramics, polymers, metallurgy, electronic materials and devices, solid-state chemistry, and solid-state physics.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>MATS 321</td>
<td>INTRODUCTION TO MATERIALS SCIENCE</td>
<td>4</td>
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<td>or ENGR 321</td>
<td>INTRODUCTION TO MATERIALS SCIENCE</td>
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<tr>
<td>Select one of the following:</td>
<td>3-4</td>
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<tr>
<td>CCE 321</td>
<td>CIVIL AND CONSTRUCTION ENGINEERING MATERIALS</td>
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<tr>
<td>MATS 322</td>
<td>MECHANICAL PROPERTIES OF MATERIALS</td>
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<td>ENGR 322</td>
<td>MECHANICAL PROPERTIES OF MATERIALS</td>
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<td>Select 19-20 credits of the following five categories:</td>
<td>19-20</td>
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<tr>
<td>CH 411</td>
<td>INORGANIC CHEMISTRY</td>
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<tr>
<td>CH 442</td>
<td>PHYSICAL CHEMISTRY</td>
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</tr>
<tr>
<td>CHE 445</td>
<td>POLYMER ENGINEERING AND SCIENCE</td>
<td></td>
</tr>
<tr>
<td>ECE 415</td>
<td>MATERIAL SCIENCE OF NANO TECHNOLOGY</td>
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<tr>
<td>ECE 416</td>
<td>ELECTRONIC MATERIALS AND DEVICES</td>
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<tr>
<td>MATS 455</td>
<td>EXPERIMENTAL TECHNIQUES IN MATERIAL SCIENCE</td>
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<tr>
<td>MATS 478</td>
<td>THIN FILM MATERIALS CHARACTERIZATION AND PROPERTIES</td>
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<tr>
<td>WSE 111</td>
<td>RENEWABLE MATERIALS FOR A GREEN PLANET</td>
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<tr>
<td>WSE 210</td>
<td>*RENEWABLE MATERIALS TECHNOLOGY AND UTILIZATION</td>
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<td>WSE 321</td>
<td>CHEMISTRY OF RENEWABLE MATERIALS</td>
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<td>WSE 322</td>
<td>PHYSICAL AND MECHANICAL PROPERTIES OF RENEWABLE MATERIALS</td>
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<td>WSE 324</td>
<td>RENEWABLE MATERIALS LABORATORY</td>
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<tr>
<td>CCE 422</td>
<td>GREEN BUILDING MATERIALS</td>
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<td>CH 412</td>
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<td>ECE 411</td>
<td>ENGINEERING MAGNETICS</td>
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<td>THIN FILM MATERIALS CHARACTERIZATION AND PROPERTIES</td>
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<tr>
<td>MATS 499</td>
<td>SPECIAL TOPICS (Physical Metallurgy)</td>
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<td>ME 484</td>
<td>FRACTURE OF MATERIALS</td>
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<td>ME 599</td>
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<td>or NSE 599</td>
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<td>WSE 324</td>
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**Processing**

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<tbody>
<tr>
<td>CHE 444</td>
<td>THIN FILM MATERIALS PROCESSING</td>
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<td>ECE 418</td>
<td>SEMICONDUCTOR PROCESSING</td>
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<td>WELDING METALLURGY</td>
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<td>MATS 499</td>
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<td>MFGE 337</td>
<td>MATERIALS AND MANUFACTURING PROCESSES</td>
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<td>MFGE 438</td>
<td>COMPOSITES MANUFACTURING</td>
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**Design**

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<td>MATS 455</td>
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<td>ME 480</td>
<td>MATERIALS SELECTION</td>
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**Ethics and Environment**

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<tr>
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<tr>
<td>MATS 221</td>
<td>THE SCIENCE, ENGINEERING AND SOCIAL IMPACT OF NANO TECHNOLOGY</td>
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<tr>
<td>or ENGR 221</td>
<td>THE SCIENCE, ENGINEERING AND SOCIAL IMPACT OF NANO TECHNOLOGY</td>
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<td>WSE 210</td>
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<tr>
<td>WSE 453</td>
<td>^FOREST PRODUCTS BUSINESS</td>
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**Total Hours**

26-28

1. At least 3 credits from each category, 12 credits must be upper division (300 plus).

* Baccalaureate Core Course (BCC)
^ Writing Intensive Course (WIC)

**Minor Code:** 764