MASTER OF CHEMISTRY IN MATERIALS CHEMISTRY

The professional master’s program in materials chemistry is a part-time, online program designed for students who wish to broaden their background in synthesis, characterization, and properties of materials and chemical systems. The program combines modern materials design and synthesis strategies with innovative characterization techniques, computational and simulation methods, project management, technical communication, and intellectual property management. It is structured to provide students with opportunities to develop a broad understanding of materials synthesis and characterization, to learn to design and manage projects, and to sharpen their intellectual property management and communication skills.

Admission

Applicants are evaluated on an individual basis but are expected to hold a bachelor’s degree in science or engineering with at least two semesters of organic chemistry and two semesters of calculus. The academic adviser will assist students in determining whether any prerequisites are necessary.

Applicants are required to submit transcripts, one letter of recommendation, an application fee and a professional statement. GRE scores are required for international students, domestic students with an undergraduate GPA between 2.5 and 3.0, or at the request of the admissions committee. The minimum GRE score for admissions consideration is 300 (quantitative + verbal) and 2.5 (analytical writing).

A final comprehensive examination is required for graduation. This program is also available on the web. Students should consult science.iit.edu/chemistry for more information.

Curriculum

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Required Courses</td>
<td>(27)</td>
</tr>
<tr>
<td>CHEM 454</td>
<td>Computational Quantum Chem</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 470</td>
<td>Introduction to Polymers</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 505</td>
<td>Spectroscopic Methods I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 509</td>
<td>Physcl Meths of Charztln</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 521</td>
<td>Structural Inorg/Material Chem</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 522</td>
<td>Efficient Cheml&amp;Mtrls Synths</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 535</td>
<td>Polymer Synthesis</td>
<td>3</td>
</tr>
<tr>
<td>SCI 511</td>
<td>Project Management</td>
<td>3</td>
</tr>
<tr>
<td>SCI 522</td>
<td>Public Engagement Scientists</td>
<td>3</td>
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<tr>
<td></td>
<td>Elective Courses</td>
<td>(5-6)</td>
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<td>Select a minimum of two courses from the following:</td>
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<tr>
<td>CHEM 513</td>
<td>Chemometrics &amp; Statistics</td>
<td>3</td>
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<tr>
<td>CHEM 524</td>
<td>Synths &amp; Intellect Prop Mgmt</td>
<td>2</td>
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<tr>
<td>CHEM 530</td>
<td>Organic Reaction Mechanisms</td>
<td>3</td>
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<td>CHEM 531</td>
<td>Tactics in Organic Synthesis</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 542</td>
<td>Polymer Charact &amp; Analysis</td>
<td>3</td>
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</table>

Total Credit Hours 32-33