Biology MS, Professional Science in Cellular and Molecular Biology Emphasis

This Master of Science in Biology with the Professional Science in Cellular and Molecular Biology emphasis requires a total of 32 credit hours, of which at least half must be at the 5000-level or above. Students will take 21 credit hours in Biology, 9 hours in business courses, and 2 credit hours of internship/practicum. Professional Science students: 1) must take 2 seminars (4 credit hours total) of BIOL 6889, 2) are limited to a maximum of 2 credit hours of Topics in Cellular and Molecular Biology (BIOL 5069) and 3) cannot count any hours of Graduate Research (BIOL 6905) as part of the 32 credit hour total.

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 6889</td>
<td>Graduate Seminar (must be taken twice)</td>
<td>4</td>
</tr>
</tbody>
</table>

Choose three of the following: 9-10

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 6602</td>
<td>Advanced Molecular Biology</td>
</tr>
<tr>
<td>BIOL 6615</td>
<td>Advanced Biotechnology Laboratory II</td>
</tr>
<tr>
<td>BIOL 6622</td>
<td>Advanced Cellular Basis of Disease</td>
</tr>
<tr>
<td>BIOL 6632</td>
<td>Advanced Nucleic Acid Structure and Function</td>
</tr>
<tr>
<td>BIOL 6642</td>
<td>Advanced Plant Biology and Biotechnology</td>
</tr>
</tbody>
</table>

Elective Courses in Biology 7-8

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 4713</td>
<td>Techniques in Biochemistry</td>
</tr>
<tr>
<td>BIOL 4842</td>
<td>Immunobiology</td>
</tr>
<tr>
<td>BIOL 5069</td>
<td>Topics in Cellular and Molecular Biology ¹</td>
</tr>
<tr>
<td>BIOL 6442</td>
<td>Advanced Developmental Biology</td>
</tr>
<tr>
<td>BIOL 6550</td>
<td>Advanced Bacterial Pathogenesis</td>
</tr>
<tr>
<td>BIOL 6602</td>
<td>Advanced Molecular Biology</td>
</tr>
<tr>
<td>BIOL 6622</td>
<td>Advanced Cellular Basis of Disease</td>
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<td>BIOL 6632</td>
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<tr>
<td>BIOL 6642</td>
<td>Advanced Plant Biology and Biotechnology</td>
</tr>
<tr>
<td>BIOL 6652</td>
<td>Advanced Virology</td>
</tr>
<tr>
<td>BIOL 6920</td>
<td>Advanced Topics in Biology (when relevant)</td>
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</tbody>
</table>

Required Internship or Practicum 2

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 5798</td>
<td>Practicum in Science in Business</td>
</tr>
<tr>
<td>or BIOL 5799</td>
<td>Internship in Sciences in Business</td>
</tr>
</tbody>
</table>

Professional Science Business Electives 9

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKTG 5700</td>
<td>Contemporary Marketing Concepts</td>
</tr>
<tr>
<td>BUS AD 5900</td>
<td>Law, Ethics and Business</td>
</tr>
</tbody>
</table>

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<tr>
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</thead>
<tbody>
<tr>
<td>MGMT 3623</td>
<td>Industrial and Organizational Psychology</td>
</tr>
<tr>
<td>BUS AD 5000</td>
<td>Economics for Managers</td>
</tr>
<tr>
<td>BUS AD 5100</td>
<td>Managerial Communication</td>
</tr>
<tr>
<td>MGMT 5600</td>
<td>Managing People in Organizations</td>
</tr>
</tbody>
</table>

¹ Maximum of 2 credit hours.