HONOURS BSC IN BIOMEDICAL SCIENCE (RESEARCH FOCUS)

Biomedical Science is an interdisciplinary program that focuses on the fundamentals of human structure and function, as well as those of other animals. The first two years provide a background in human anatomy and psychology, in addition to more in-depth knowledge in basic sciences like biology, chemistry, biochemistry, and mathematics. At the end of second year, in addition to courses in biology and biochemistry, students may choose to enter an option within the biomedical sciences program (Neuroscience, Cellular and Molecular Medicine, Bioanalytical Science, Medicinal Chemistry or Biostatistics). The Research Focus is ideal for students thinking of a career in research, as it consists of an immersive research experience in the third and fourth years that will equip students with advanced research, analysis and communication skills applicable to diverse careers. On graduation, they will be ready for more advanced research training or for admission to a professional program in human health.

Admission to this program is competitive and higher averages are required.

This program is offered in English and in French.

Program Requirements

The extended French stream is available with this program.

Compulsory Courses at the 1000 level

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANP 1105</td>
<td>Human Anatomy and Physiology I</td>
<td>3</td>
</tr>
<tr>
<td>ANP 1106</td>
<td>Human Anatomy and Physiology II</td>
<td>3</td>
</tr>
<tr>
<td>BIO 1130</td>
<td>Introduction to Organismal Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIO 1140</td>
<td>Introduction to Cell Biology</td>
<td>3</td>
</tr>
<tr>
<td>CHM 1311</td>
<td>Principles of Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHM 1321</td>
<td>Organic Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>MAT 1330</td>
<td>Calculus for the Life Sciences I</td>
<td>3</td>
</tr>
<tr>
<td>MAT 1332</td>
<td>Calculus for the Life Sciences II</td>
<td>3</td>
</tr>
<tr>
<td>PSY 1101</td>
<td>Introduction to Psychology: Foundations</td>
<td>3</td>
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Compulsory Courses at the 2000 level

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCH 2333</td>
<td>Introduction to Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>BIO 2133</td>
<td>Genetics</td>
<td>3</td>
</tr>
<tr>
<td>CHM 2120</td>
<td>Organic Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>MAT 2379</td>
<td>Introduction to Biostatistics</td>
<td>3</td>
</tr>
<tr>
<td>PHI 2396</td>
<td>Bioethics</td>
<td>3</td>
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Compulsory Courses at the 3000 level

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>BCH 3120</td>
<td>General Intermediary Metabolism</td>
<td>3</td>
</tr>
<tr>
<td>BIM 3009</td>
<td>Research Practicum</td>
<td>6</td>
</tr>
<tr>
<td>BIO 3124</td>
<td>General Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>BIO 3170</td>
<td>Molecular Biology</td>
<td>3</td>
</tr>
</tbody>
</table>

Compulsory Courses at the 4000 level

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIM 4009</td>
<td>Research Project - Biomedical Science</td>
<td>9</td>
</tr>
<tr>
<td>BIO 4158</td>
<td>Applied Biostatistics</td>
<td>3</td>
</tr>
</tbody>
</table>

Optional Courses

3 optional course units in English (ENG) at the 1000 or 2000 level, excluding ENG 1112 and ENG 1131

3 course units from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 1102</td>
<td>Introduction to Psychology: Applications</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2114</td>
<td>Lifespan Psychology</td>
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</table>

3 course units from:

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPS 2110</td>
<td>Introduction to Biopharmaceutical Science</td>
<td>3</td>
</tr>
<tr>
<td>PHY 1321</td>
<td>Principles of Physics I</td>
<td></td>
</tr>
<tr>
<td>PHY 1322</td>
<td>Principles of Physics II</td>
<td></td>
</tr>
</tbody>
</table>

9 optional course units offered by the Faculty of Science

18 optional course units at the 3000 or 4000 level offered by the Faculty of Science

Elective Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 1102</td>
<td>Introduction to Psychology: Applications</td>
<td>3</td>
</tr>
</tbody>
</table>

Total: 120 Units

1 Students doing an option should choose a course that is not mandatory for their selected option.

2 The following courses are considered as science courses: PHA 4107, PHS 3341, PHS 3342, PHS 4300, PHS 4336.