1.0 Degree Title
Specify the two degrees for concurrent degree programs

1.1 B.Sc. Honours in Microbiology & Immunology

1.2 Concentration (Legacy = Concentration/Option)
If applicable (30 char. max.)

1.3 Minor (with Concentration, if applicable)
(30 char. max.)

1.4 Category

- Faculty Program (FP)
- Major
- Joint Major
- Major Concentration (CON)
- Minor
- Minor Concentration (CON)

1.5 Honours (HON) X
- Joint Honours Component (HC)
- Internship/Co-op Thesis (T)
- Non-Thesis (N)
- Other
- Please specify

1.5 B.Sc. Honours in Microbiology & Immunology

2.0 Administering Faculty/Unit

- Science/Microbiology & Immunology
- Medicine/Microbiology & Immunology

2.0 Administering Faculty/Unit

3.0 Effective Term of revision or retirement

- Please give reasons in 5.0 “Rationale” in the case of retirement
- (Ex. Sept. 2004 = 200409) Retirement

- Term: 201209

4.0 Existing Credit Weight

- 73

4.0 Existing Credit Weight

- Proposed Credit Weight

- 73

5.0 Rationale for revised program

- A new required U1 course, MMM 214, Introduction to Immunology: Elements of Immunity, has been introduced. The requirement for CHEM 203/204 has been removed, and these courses will be added to the Complementary Course list.

6.0 Revised Program Description (Maximum 150 words)
### 7.0 List of existing program and proposed program

**Existing program (list courses as follows: Subj Code/Crse Num, Title, Credit weight, under the headings of: Required Courses, Complementary Courses, Elective Courses)**

<table>
<thead>
<tr>
<th>Subj Code</th>
<th>Crse Num</th>
<th>Title</th>
<th>Credit weight</th>
<th>Under the heading of:</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL</td>
<td>200</td>
<td>Molecular Biology</td>
<td>3</td>
<td>Required Courses</td>
</tr>
<tr>
<td>BIOL</td>
<td>202</td>
<td>Basic Genetics</td>
<td>3</td>
<td>Complementary Courses</td>
</tr>
<tr>
<td>CHEM</td>
<td>212</td>
<td>Introductory Organic Chemistry 1</td>
<td>4</td>
<td>Elective Courses</td>
</tr>
<tr>
<td>CHEM</td>
<td>222</td>
<td>Introductory Organic Chemistry 2</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MIMM</td>
<td>211</td>
<td>Introductory Microbiology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MIMM</td>
<td>212</td>
<td>Laboratory in Microbiology</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

One of:
- BIOL 212 (3) Molecular Mechanisms of Cell Function
- BIOL 201 (3) Cell Biology and Metabolism

One of:
- CHEM 203 (3) Survey of Physical Chemistry
- CHEM 204 (3) Physical Chemistry/Biological Sciences I

**U1, U2 or U3 Required Course (3 credits)**

One of:
- BIOL 373 (3) Biometry
- MATH 203 (3) Principles of Statistics 1
- PSYC 204 (3) Introduction to Psychological Statistics

**U2 Required Courses (21 credits)**

- BIOC 311 (3) Metabolic Biochemistry
- BIOC 312 (3) Biochemistry of Macromolecules
- MIMM 314 (3) Immunology
- MIMM 323 (3) Microbial Physiology
- MIMM 324 (3) Fundamental Virology
- MIMM 386D1 (3) Laboratory in Microbiology and Immunology
- MIMM 386D2 (3) Laboratory in Microbiology and Immunology

**U3 Required Courses (21 credits)**

- MIMM 413 (3) Parasitology
- MIMM 465 (3) Bacterial Pathogenesis
- MIMM 466 (3) Viral Pathogenesis
- MIMM 502D1 (6) Honours Research Project in Microbiology
- MIMM 502D2 (6) Honours Research Project in Microbiology

**Complementary Course (3 credits)**

3 credits selected from:
- ANAT 458 (3) Membranes and Cellular Signaling
- BIOC 404 (3) Biophysical Chemistry
- BIOC 450 (3) Protein Structure and Function
- BIOC 454 (3) Nucleic Acids
- BIOC 458 (3) Membranes and Cellular Signaling
- BIOL 520 (3) Gene Activity in Development
- BIOT 505 (3) Selected Topics in Biotechnology
- MIMM 414 (3) Advanced Immunology
- MIMM 509 (3) Inflammatory Processes
- PHAR 562 (3) General Pharmacology 1
- PHAR 563 (3) General Pharmacology 2
- PSYT 455 (3) Neurochemistry

**Proposed program (list courses as follows: Subj Code/Crse Num, Title, Credit weight, under the headings of: Required Courses, Complementary Courses, Elective Courses)**

<table>
<thead>
<tr>
<th>Subj Code</th>
<th>Crse Num</th>
<th>Title</th>
<th>Credit weight</th>
<th>Under the heading of:</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL</td>
<td>200</td>
<td>Molecular Biology</td>
<td>3</td>
<td>Required Courses</td>
</tr>
<tr>
<td>BIOL</td>
<td>202</td>
<td>Basic Genetics</td>
<td>3</td>
<td>Complementary Courses</td>
</tr>
<tr>
<td>CHEM</td>
<td>212</td>
<td>Introductory Organic Chemistry 1</td>
<td>4</td>
<td>Elective Courses</td>
</tr>
<tr>
<td>CHEM</td>
<td>222</td>
<td>Introductory Organic Chemistry 2</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MIMM</td>
<td>211</td>
<td>Introductory Microbiology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MIMM</td>
<td>212</td>
<td>Laboratory in Microbiology</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

One of:
- BIOC 212 (3) Molecular Mechanisms of Cell Function
- BIOL 201 (3) Cell Biology and Metabolism

One of:
- CHEM 203 (3) Survey of Physical Chemistry
- CHEM 204 (3) Physical Chemistry/Biological Sciences I

**U1 Required Courses (25 credits)**

* Students who have taken CHEM 212 in CEGEP are exempt and must replace these credits with an elective course(s).
** Students who have taken CHEM 222 in CEGEP are exempt and must replace these credits with an elective course(s).
- BIOL 200 (3) Molecular Biology
- BIOL 202 (3) Basic Genetics
- CHEM 212* (4) Introductory Organic Chemistry 1
- CHEM 222** (4) Introductory Organic Chemistry 2
- MIMM 211 (3) Introductory Microbiology
- MIMM 212 (2) Laboratory in Microbiology

One of:
- BIOC 212 (3) Molecular Mechanisms of Cell Function
- BIOL 201 (3) Cell Biology and Metabolism

One of:
- CHEM 203 (3) Survey of Physical Chemistry
- CHEM 204 (3) Physical Chemistry/Biological Sciences I

**U1, U2 or U3 Required Course (3 credits)**

One of:
- BIOL 373 (3) Biometry
- MATH 203 (3) Principles of Statistics 1
- PSYC 204 (3) Introduction to Psychological Statistics

**U2 Required Courses (21 credits)**

- BIOC 311 (3) Metabolic Biochemistry
- BIOC 312 (3) Biochemistry of Macromolecules
- MIMM 314 (3) Immunology
- MIMM 323 (3) Microbial Physiology
- MIMM 324 (3) Fundamental Virology
- MIMM 386D1 (3) Laboratory in Microbiology and Immunology
- MIMM 386D2 (3) Laboratory in Microbiology and Immunology

**U3 Required Courses (21 credits)**

- MIMM 413 (3) Parasitology
- MIMM 465 (3) Bacterial Pathogenesis
- MIMM 466 (3) Viral Pathogenesis
- MIMM 502D1 (6) Honours Research Project in Microbiology
- MIMM 502D2 (6) Honours Research Project in Microbiology

**Complementary Course (3 credits)**

3 credits selected from:
- ANAT 458 (3) Membranes and Cellular Signaling
- BIOC 404 (3) Biophysical Chemistry
- BIOC 450 (3) Protein Structure and Function
- BIOC 454 (3) Nucleic Acids
- BIOC 458 (3) Membranes and Cellular Signaling
- BIOL 520 (3) Gene Activity in Development
- BIOT 505 (3) Selected Topics in Biotechnology
- CHEM 203 (3) Survey of Physical Chemistry
- CHEM 204 (3) Physical Chemistry/Biological Sciences I

**Honours Microbiology and Immunology (73 credits)**

<table>
<thead>
<tr>
<th>Subj Code</th>
<th>Crse Num</th>
<th>Title</th>
<th>Credit weight</th>
<th>Under the heading of:</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL</td>
<td>200</td>
<td>Molecular Biology</td>
<td>3</td>
<td>Required Courses</td>
</tr>
<tr>
<td>BIOL</td>
<td>202</td>
<td>Basic Genetics</td>
<td>3</td>
<td>Complementary Courses</td>
</tr>
<tr>
<td>CHEM</td>
<td>212</td>
<td>Introductory Organic Chemistry 1</td>
<td>4</td>
<td>Elective Courses</td>
</tr>
<tr>
<td>CHEM</td>
<td>222</td>
<td>Introductory Organic Chemistry 2</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>MIMM</td>
<td>211</td>
<td>Introductory Microbiology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MIMM</td>
<td>212</td>
<td>Laboratory in Microbiology</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

One of:
- BIOL 212 (3) Molecular Mechanisms of Cell Function
- BIOL 201 (3) Cell Biology and Metabolism

One of:
- CHEM 203 (3) Survey of Physical Chemistry
- CHEM 204 (3) Physical Chemistry/Biological Sciences I

**U1, U2 or U3 Required Course (3 credits)**

One of:
- BIOL 373 (3) Biometry
- MATH 203 (3) Principles of Statistics 1
- PSYC 204 (3) Introduction to Psychological Statistics

**U2 Required Courses (21 credits)**

- BIOC 311 (3) Metabolic Biochemistry
- BIOC 312 (3) Biochemistry of Macromolecules
- MIMM 314 (3) Immunology
- MIMM 323 (3) Microbial Physiology
- MIMM 324 (3) Fundamental Virology
- MIMM 386D1 (3) Laboratory in Microbiology and Immunology
- MIMM 386D2 (3) Laboratory in Microbiology and Immunology

**U3 Required Courses (21 credits)**

- MIMM 413 (3) Parasitology
- MIMM 465 (3) Bacterial Pathogenesis
- MIMM 466 (3) Viral Pathogenesis
- MIMM 502D1 (6) Honours Research Project in Microbiology
- MIMM 502D2 (6) Honours Research Project in Microbiology

**Complementary Course (3 credits)**

3 credits selected from:
- ANAT 458 (3) Membranes and Cellular Signaling
- BIOC 404 (3) Biophysical Chemistry
- BIOC 450 (3) Protein Structure and Function
- BIOC 454 (3) Nucleic Acids
- BIOC 458 (3) Membranes and Cellular Signaling
- BIOL 520 (3) Gene Activity in Development
- BIOT 505 (3) Selected Topics in Biotechnology

**CHEM 203 (3) Survey of Physical Chemistry**

**CHEM 204 (3) Physical Chemistry/Biological Sciences I**

- MIMM 414 (3) Advanced Immunology
- MIMM 509 (3) Inflammatory Processes
- PHAR 562 (3) General Pharmacology 1
- PHAR 563 (3) General Pharmacology 2
- PSYT 455 (3) Neurochemistry

**Attach extra page(s) as needed**
### 8.0 Consultation with Related Units

- [ ] Yes
- [ ] No

- Financial Consult
  - [ ] Yes
  - [ ] No

Attach list of consultations

---

### 9. Approvals

<table>
<thead>
<tr>
<th>Routing Sequence</th>
<th>Name</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curric/Acad Committee</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCTP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APPC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senate</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Submitted by

- Name
- Phone
- Email
- Submission Date

To be completed by ARR:

- CIP Code