# COMBINED MAJOR IN SCIENCE

http://www.cms.science.ubc.ca/home

Life Sciences (LSC), Mathematical Sciences - Math (MATH), Physics (PHYS)

## First and Second Year

<table>
<thead>
<tr>
<th>First Year</th>
<th>MATH 100 (or equiv)</th>
<th>CHEM 121 (111)</th>
<th>PHYS 101 (or PHYS107)</th>
<th>BIOL 112</th>
<th>Communication (See page 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MATH 101 (or equiv)</td>
<td>CHEM 123 (113)</td>
<td>PHYS 118 &amp; 119 (or 108 &amp; 109)</td>
<td>BIOL 121 BOIL 140</td>
<td>Communication (See page 2)</td>
</tr>
<tr>
<td>Second Year</td>
<td>STAT 200</td>
<td>PHYS 200</td>
<td>MATH 200</td>
<td>BIOL 200</td>
<td>Arts (See page 2)</td>
</tr>
<tr>
<td></td>
<td>Computing Requirement (see page 2)</td>
<td>PHYS 219 / PHYS 229 (Recom.)</td>
<td>MATH 221</td>
<td>(BIOL 201 (Recom.)</td>
<td>Arts (See page 2)</td>
</tr>
</tbody>
</table>

Note: BIOL 201; MATH 215 (or 225), MATH 217 (or 227 or 317) recommended

## Third and Fourth Year – See below for specific information on packages

<table>
<thead>
<tr>
<th>3rd/4th Years</th>
<th>SCIE 300</th>
<th>PHYS 301, 304, or 333</th>
<th>MATH pkg course</th>
<th>LSC pkg course</th>
<th>Arts (See page 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PHYS pkg course</td>
<td>MATH pkg course</td>
<td>LSC pkg course</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Generalist Requirement (see page 2)</td>
<td>Lab Requirement (See page 2)</td>
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</tbody>
</table>

## CMS PACKAGES:

1. **LIFE SCIENCES (LSC) CMS PACKAGE:**
   - 9 credits Life Science courses 300- or 400-level
   - Life Science courses include: CAPS 301, 390, 391, BIOC, BIOL (except BIOL 300), GEOB 307, 407, MRNE, MEDG, MICB, PCTH, PHYL, PSYC 360-368, PSYC 460-462, and EOSC 470, 471, 474, 475, 478

2. **MATHEMATICAL SCIENCES (MASC) – MATH CMS PACKAGE:**
   - 9 credits 300- and 400-level MATH
   - Recommended*: MATH 303, 316, 345, 361, 441, 442, 445
   - *additional prerequisites

3. **PHYSICS (PHYS) CMS PACKAGE:**
   - 3 credits of PHYS 301*, 304*, 333
   - 6 credits PHYS or ASTR courses 300- or 400-level
   - *Other Prerequisites in addition to 1st/2nd year Core.
LOWER LEVEL REQUIREMENTS:
http://www.calendar.ubc.ca/vancouver/index.cfm?tree=12,215,410,1465

LAB REQUIREMENT:
Must take 2 of the following:

- **CHEM 315** (1 cr) - Prerequisites: CHEM 233, 235, 205
- **EOSC 442** (1 cr) - Prerequisites: EOSC 340 and one of (CPSC 110, CPSC111, CPSC 301, EOSC 211, PHYS 210, MATH 210), and one of STAT 200, STAT241, BIOL300)
- **BIOL 342** (2 cr) - Prerequisite: BIOL 121, 140. (BIOL112/BIOL200 recommended)
- **PHYS 309** (3 cr) - Prerequisite: PHYS 209

CORE COURSES:

- **MATH 100/101** (or equivalent)
- **STAT 200** - can be replaced with STAT 241 or BIOL 300 in program
  - *Note: BIOL 300 does not count as a life science elective.
- **SCIE 300** (Communicating Science)
- **Computing Requirement**: one of: CPSC 110 (or 111), CPSC 301, EOSC 211, MATH 210, PHYS 210
- **Generalist Requirement**: One course (at least 3 cr) from:
  - Chemistry: CHEM 200-level
  - Earth Science: EOSC 340, 326, 477, 453, 354, 329, GEOB 400

GRADUATION CHECKLIST TABLE FOR CMS

<table>
<thead>
<tr>
<th>CREDIT TOTALS</th>
<th>Completed</th>
<th>in Progress</th>
<th>Total</th>
<th>Required</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Credits</strong>: includes all UBC courses, transfer credits &amp; advance credits. DO NOT count paired courses, COOP credits, or courses “not for credit in the Faculty of Science”.</td>
<td></td>
<td></td>
<td>120</td>
<td></td>
</tr>
<tr>
<td><strong>Science Credits</strong>: includes all required &amp; elective Science courses at all year levels.</td>
<td></td>
<td></td>
<td>72</td>
<td></td>
</tr>
<tr>
<td><strong>Communication Credits</strong>: six credits from ENGL 100, 110, 111, 112 (recommended), 120, 121; SCIE 113; SCIE 300 or CHEM 300; APSC 176; ASTU 100, 150; or WRDS 150; their equivalents</td>
<td></td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td><strong>Arts Credits</strong>: includes arts courses at all year levels.</td>
<td></td>
<td></td>
<td>12</td>
<td></td>
</tr>
<tr>
<td><strong>Upper-Level Credits</strong>: includes all courses at the 300-level and 400-level in any field (Arts, Science, and a maximum of 18 “Other” cr.).</td>
<td></td>
<td></td>
<td>48</td>
<td></td>
</tr>
<tr>
<td><strong>Upper-Level Science Credits</strong>: includes all Science courses at the 300-level and 400-level, both required and elective credits for program.</td>
<td></td>
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<td>32 - 38*</td>
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* Number of credits will depend on selection of lab and generalist requirements.

Review CMS information in Calendar:
http://www.calendar.ubc.ca/vancouver/index.cfm?tree=12,215,410,1474