COMBINED MAJOR IN SCIENCE
http://www.cms.science.ubc.ca/home
Mathematical sciences – Mathematics (MATH), Life Sciences (LSC), Physics & Astronomy – Astronomy (ASTR)

### First Year

- **MATH 100** (or equiv.)
- **MATH 101** (or equiv.)
- **CHEM 121** (or 111)
- **CHEM 123**
- **BIOL 112**
- **BIOL 121** + **BIOL 140**
- **PHYS 101** or 107 or 117
- **PHYS 118** + 119 (or 102, or 108+109)
- Communication (See page 2)

### Second Year

- **STAT 200** (or equiv.)
- **Computing req. (see p. 2)**
- **MATH 221**
- **MATH 217** (or 200 + 317)
- **BIOL 200**
- **PHYS 200**
- **PHYS 203**

*EES Elective: one of ATSC 201, BIOL 111, BIOL 112, BIOL 121, GEOB 103, 200 or EOSC 110 and 111

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

- **SCIE 300**
- **(PHYS 219 + 229 recom.)**
- **MATH pkg Course 1**
- **MATH pkg Course 2**
- **LSC pkg Course 1**
- **LSC pkg Course 2**
- **PHYS 216**
- **ASTR pkg Course 1 (3 cr)**

### Generalist req. (see page 2)

#### Third and Fourth Years

- **Lab req. (See page 2)**

1. **MATHEMATICAL SCIENCES (MASC) - MATH CMS PKG COURSES:**
   - MATH courses at the 300- or 400-level; recommended: MATH 302, 307, 317, 340, 360
   - ! Some courses may have additional pre-requisites!
   - Pay particular attention to the credit-exclusion list (UBC calendar)

2. **LIFE SCIENCES (LSC) CMS PKG COURSES:**
   - Courses at the 300- or 400-level in CAPS, BIOC, BIOL (except: BIOL300, 344, 345, 346, 448), MRNE, MEDG, PCH; as well as GEOB 307, 407, EOSC 470, 471, 474, 475, 478, PSYC 360-371 and 460 - 472.

3. **PHYSICS (PHYS) CMS PKG COURSES:**
   - All PHYS courses at the 300- or 400-level, except PHYS 348

4. **ASTRONOMY (ASTR) CMS PKG COURSES:**
   - ASTR 300, 333, 403, 406, 407
**LOWER LEVEL REQUIREMENTS FOR BSC:**
http://www.calendar.ubc.ca/vancouver/index.cfm?tree=12,215,410,1465

**CMS LAB REQUIREMENT**

Must take 2 of the following:

- **CHEM 315** (1 cr) - Prerequisites: one of CHEM 233+235, CHEM 205, CHEM 208, CHEM 211
- **EOSC 442** (1 cr) - Prerequisites: EOSC 340, and one of CPSC 103, CPSC 110, CPSC 111, CPSC 301, EOSC 211, PHYS 210, MATH 210, and one of STAT 200, STAT 241, STAT 251, BIOL 300
- **BIOL 342** (2 cr) - Prerequisite: BIOL 121, 140
- **PHYS 309** (3 cr) - Prerequisite: PHYS 219 and PHYS 229 (PHYS 219 has multiple prerequisites)

**CMS CORE COURSES:**

- **MATH 100/101** (or equivalent)
- **STAT 200** (or STAT 241 or STAT 251 or BIOL 300)
- **SCIE 300** (Communicating Science)
- **Computing Requirement**: one of CPSC 100, CPSC 103, CPSC 110 (or 111), CPSC 301, EOSC 211, MATH 210, PHYS 210
- **Generalist Requirement**: one (at least 3 cr) of CHEM 200 or higher (except: CHEM 300), EOSC 340, 326, 354, 329

**CMS GRADUATION CHECKLIST TABLE:**

Review Upper Level B.Sc. Requirements:

<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>
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<td>120</td>
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<tr>
<td><strong>Science Credits</strong>: includes all required &amp; elective Science courses at all year levels.</td>
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<td>72</td>
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<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>
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<tr>
<td><strong>Arts Credits</strong>: includes arts courses at all year levels.</td>
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<td>12</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>
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<td>48</td>
</tr>
<tr>
<td><strong>Upper-Level Science Credits</strong>: includes all Science courses at the 300-level and 400-level required for program.</td>
<td></td>
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<td></td>
<td>32 – 38*</td>
</tr>
</tbody>
</table>

* 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