# COMBINED MAJOR IN SCIENCE

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

Chemistry (CHEM), Earth and Environmental Sciences (EES), Mathematical Sciences – INTERFACE (any option)

## First Year

<table>
<thead>
<tr>
<th>□ MATH 100 (or equiv.)</th>
<th>□ CHEM 121 (or 111)</th>
<th>□ PHYS 101 or 107 or 117</th>
<th>□ EES* elective</th>
<th>□ Communication (See page 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ MATH 101 (or equiv.)</td>
<td>□ CHEM 123</td>
<td>□ (EOSC 114 Recom)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Second Year

<table>
<thead>
<tr>
<th>□ STAT 200 (or equiv.)</th>
<th>□ CHEM 233, 235</th>
<th>□ CPSC 121 AND 210 (Interface C only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Computing req. (see p. 2) only Interface B</td>
<td>□ CHEM 205 or 208 or 211 or 213</td>
<td></td>
</tr>
<tr>
<td>□ MATH 200</td>
<td>□ MATH 221</td>
<td></td>
</tr>
</tbody>
</table>

*EES Elective: one of ATSC 201, BIOL 111, BIOL 112, BIOL 121, GEOB 103, 200 or EOSC 110 and 111 (BIOL 111 appropriate for students who don’t have Biology 11 or 12)

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

<table>
<thead>
<tr>
<th>□ SCIE 300</th>
<th>□ CHEM 341</th>
<th>□ EOSC 340</th>
<th>□ Interface pkg Course 1</th>
<th>□ Interface pkg Course 2</th>
<th>□ Interface pkg Course 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ _________</td>
<td>□ _________</td>
<td>□ _________</td>
<td>□ _________</td>
<td>□ _________</td>
<td>□ _________</td>
</tr>
</tbody>
</table>

### Third and Fourth Years

- Generalist req. (see page 2)
- Lab req. (See page 2)

## Packages

1. **CHEMISTRY (CHEM) CMS PKG COURSES:**
   - 6 credits CHEM courses 300- or 400-level (except: CHEM 300, CHEM 348)

2. **EARTH AND ENVIRONMENTAL SCIENCES (EES) CMS PKG COURSES:**
   - Recommended: another one of EOSC 324, 326, 329, 330, 355, 372, 373, or GEOB 300
   - Specific prerequisites required from the EES electives

3. **MATHEMATICAL SCIENCES (MASC) – INTERFACES A – D CMS PKG COURSES:**
   - Select one of the following Interface options:
     - **Interface A** – Prerequisites: CPSC 110 or 111, MATH 200, 221; Package courses: two of: MATH/STAT 302, MATH 303, STAT 305; One of: CPSC 302, CPSC 303
• **Interface B** – Prerequisites: MATH 200, 221; Package courses: All of: MATH/STAT 302, MATH 303, STAT 305

• **Interface C** – Prerequisites: CPSC 110 or 111, 121, 210 or, 221, MATH 200, 221; Package courses: All of: CPSC 340, STAT 306, STAT 406

• **Interface D** – Prerequisites: CPSC 110 or 111, 121, 210 or, 221, MATH 200, 221; Package courses: All of: CPSC 302, 402, MATH 307

**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 or 355 (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, CPSC111, CPSC 301, EOSC 211, PHYS 210, MATH 210, and one of STAT 200, STAT241, STAT251, BIOL300
- **BIOL 342 (2 cr)** - Prerequisite: BIOL 121, 140
- **PHYS 309 (3 cr)** - Prerequisite: PHYS 219 and PHYS 229 (PHYS 219 has multiple prerequisites). This course does not count as a PHYS package course unless you take two other lab courses to fulfill the lab requirement.

**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: only required for students who entered the CMS program prior to 2019S.** These students take one (at least 3 cr) from BIOL 121, 343, 345, 346, 438, ASTR 200, PHYS 200, 305, 330, 333.

**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>
<td></td>
<td></td>
<td>120</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></td>
<td>72</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></td>
<td>6</td>
</tr>
<tr>
<td><strong>Arts Credits</strong>: includes arts courses at all year levels.</td>
<td></td>
<td></td>
<td></td>
<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>
<td></td>
<td></td>
<td></td>
<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>
<td></td>
<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