COMBINED MAJOR IN SCIENCE
http://www.cms.science.ubc.ca/home
Chemistry (CHEM), Earth and Environmental Sciences (EES), Mathematical Sciences - MATH

First Year

☐ MATH 100 (or equiv.)
☐ MATH 101 (or equiv.)
☐ CHEM 121 or 120+115 or CHEM 111 or 110+115
☐ CHEM 123 or 130+135
☐ PHYS 101 or 107 or 117 or 131
☐ EES* elective
☐ BIOL 121 BIOL 140/180
☐ Communication (See page 2)

Second Year

☐ STAT 200 (or equiv.)
☐ Computing req. (see page 2)
☐ CHEM 233 +235 or CHEM 203 or 223+225
☐ CHEM 205 or 208 or 213 or 211 or 210+215
☐ (MATH 215 Recom)
☐ MATH 200
☐ MATH 221
☐ Arts (See page 2)

*EES Elective: one of ATSC 201, BIOL 111, BIOL 112, BIOL 121, GEOB/GEOS 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

Third and Fourth Years

☐ SCIE 300
☐ CHEM 341
☐ EOSC 340
☐ MATH pkg Course 1
☐ MATH pkg Course 2
☐ MATH pkg Course 3
☐ Arts (See page 2)

☐ Generalist req. (see page 2)
☐ CHEM pkg Course 1
☐ EOSC 326, or 355, or 372
☐ EES pkg course
☐ Lab req. (See page 2)
☐ Lab req. (See page 2)
☐ Lab req. (See page 2)

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 GEOS 300*
   - Specific prerequisites required from the EES electives*

3. 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)
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 203 or CHEM 223 + 225, CHEM 205, CHEM 208, CHEM 211 or CHEM 210+215.
- **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, STAT241, STAT251, BIOL300
- **BIOL 342** (2 cr) - Prerequisite: BIOL 121, 140 or 180
- **PHYS 309** (3 cr) - Prerequisite: PHYS 219 and PHYS 229 (PHYS 219 has multiple prerequisites). Please note that 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>Total Credits: 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>Science Credits: 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>Communication Credits: six credits from ENGL 100, 110, 111, 120, 121; SCIE 113 (recommended); CHEM 300; APSC 176; ASTU 100, 150; or WRDS 150 (recommended); their equivalents; SCIE 300 is required for the CMS program</td>
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<td>6</td>
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<tr>
<td>Arts Credits: includes arts courses at all year levels</td>
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<td>12</td>
</tr>
<tr>
<td>Upper-Level Credits: 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>
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<tr>
<td>Upper-Level Science Credits: 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