# COMBINED MAJOR IN SCIENCE
http://www.cms.science.ubc.ca/home
Chemistry (CHEM), Earth and Environmental Sciences (EES), Physics & Astronomy – Physics (PHYS)

## First Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 100 (or equiv.)</td>
<td></td>
</tr>
<tr>
<td>MATH 101 (or equiv.)</td>
<td></td>
</tr>
<tr>
<td>CHEM 121 (or 111)</td>
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<tr>
<td>CHEM 123</td>
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<tr>
<td>EES* elective</td>
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</tr>
<tr>
<td>PHYS 101 or 107 or 117</td>
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</tr>
<tr>
<td>PHYS 118 + 119 (or 102, or 108+109)</td>
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</tbody>
</table>

*Communication (See page 2)*

## Second Year

<table>
<thead>
<tr>
<th>Course</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 200 (or equiv.)</td>
<td></td>
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<tr>
<td>CHEM 233, 235</td>
<td></td>
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<tr>
<td>CHEM 205 or 208 or 211 or 213</td>
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<tr>
<td>MATH 217 (or 200)</td>
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<tr>
<td>MATH 215 recom.</td>
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<tr>
<td>PHYS 200</td>
<td></td>
</tr>
<tr>
<td>(PHYS 219 + 229 recom.)</td>
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</tbody>
</table>

*Communication (See page 2)*

**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

<table>
<thead>
<tr>
<th>Course</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCIE 300</td>
<td></td>
</tr>
<tr>
<td>CHEM 341</td>
<td></td>
</tr>
<tr>
<td>CHEM pkg Course 1</td>
<td></td>
</tr>
<tr>
<td>EOSC 340</td>
<td></td>
</tr>
<tr>
<td>EOSC 326, or 355, or 372</td>
<td></td>
</tr>
<tr>
<td>PHYS pkg Course 1 (3cr)</td>
<td></td>
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<tr>
<td>Arts (See page 2)</td>
<td></td>
</tr>
</tbody>
</table>

*Generalist req. (see page 2)*

<table>
<thead>
<tr>
<th>Course</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM pkg Course 2</td>
<td></td>
</tr>
<tr>
<td>EES pkg course</td>
<td></td>
</tr>
<tr>
<td>PHAS pkg Course 2 (3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

*Arts (See page 2)*

### Package Requirements

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, 333, 355, 372, 373, or GEOB 300+.
   - Specific prerequisites required from the EES electives

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

4. **PHYSICS & ASTRONOMY (PHAS) CMS PKG COURSES:**
   - All PHYS and ASTR courses at the 300- or 400-level, except PHYS 348
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 BIOL 112, 121, 345, 346, 438, MATH 200-level, MATH 300-level
  Note: students pursuing the CHEM/EES/PHYS curriculum automatically fulfill their generalist requirement by virtue of completing their second year MATH courses.

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>
<td></td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>Science Credits: includes all required &amp; elective Science courses at all year levels.</td>
<td></td>
<td></td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>Communication Credits: 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>Arts Credits: includes arts courses at all year levels.</td>
<td></td>
<td></td>
<td>12</td>
<td></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>
<td></td>
<td></td>
<td>48</td>
<td></td>
</tr>
<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>32 – 38*</td>
<td></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