**COMBINED MAJOR IN SCIENCE**

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

Earth and Environmental Sciences (EES), Mathematical Sciences - Math (MASC), Physics (PHYS)

### First and Second Year

#### First Year

- **MATH 100** (or equiv)
- **CHEM 121** (or CHEM 111)
- **PHYS 101** (or PHYS 107)
- **EES* elective**
- Communication
  (See page 2)

#### Second Year

- **STAT 200**
- **PHYS 200**
- **MATH 200**
- **MATH 221**
- **Arts**
  (See page 2)

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

Students who do not have credit for Biology 11 or 12 take 3 credits of 100-level BIOL (usually BIOL 111).

Note: One of MATH 217 or 227 or 317 recommended.

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

#### 3rd/4th Years

- **SCIE 300**
- **PHYS 301, 304, or 333**
- **MATH pkg course**
- **EOSC 340**
- **Arts**
  (See page 2)

- **Generalist Requirement**
  (see page 2)
- **PHYS pkg course**
- **Lab Requirement**
  (see page 2)
- **MATH pkg course**
- **EES pkg course**
- **Arts**
  (See page 2)

### CMS PACKAGES:

1. **EARTH AND ENVIRONMENTAL SCIENCES (EES) CMS PACKAGE**:  
   - EOSC 340 (3)  
   - 3 credits from EOSC 326*, 355, 372  
   - 3 credits from Earth and Environmental Science courses 300- or 400-level: ATSC, ENVR, GEOB (except for GEOB 307, 407), EOSC (except for EOSC 310, 311, 312, 314, 315, 371, 470, 471, 474, 475, 478).  
   - Recommended: another one of EOSC 324, 326*, 329, 330, 355, 372, 373 or GEOB 300*  
   - Specific prerequisites required from the EES electives*

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 will 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
  - Life Science: BIOL 121, 343, 345, 346, 438

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>
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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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<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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<td><strong>Arts Credits:</strong> includes arts courses at all year levels.</td>
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<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>
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<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>
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<td>32 - 38*</td>
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</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