**COMBINED MAJOR IN SCIENCE**

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

Mathematical sciences – Computer science (CPSC)¹, Earth and Environmental Sciences (EES), Physics & Astronomy – Physics (PHYS)

### First Year
- □ MATH 100 (or equiv.)
- □ MATH 101 (or equiv.)
- □ CPSC 110 or CPSC 111
- □ CPSC 121
- □ EES* elective
- □ CHEM 121 (or 111)
- □ 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 page 2)
- □ CPSC 210 or CPSC 211
- □ (CPSC 213 recom.)
- □ MATH 217 (or 200)
- □ (MATH 215 recom.)
- □ PHYS 200
- □ (PHYS 219 + 229 recom.)
- □ Arts (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

### Third and Fourth Years
- □ SCIE 300
- □ CPSC pkg course 1
- □ EOSC 340
- □ PHYS pkg Course 1 (3cr)
- □ Arts (See page 2)
- □ CPSC pkg course 2
- □ EES pkg course
- □ PHAS pkg Course 1 (3 cr)
- □ Arts (See page 2)
- □ Lab req. (See page 2)
- □ PHAS pkg Course 2 (3 cr)
- □ Generalist req. (see page 2)
- □ Lab req. (See page 2)

### 1. MATHEMATICAL SCIENCES – COMPUTER SCIENCE (CPSC) CMS PKG COURSES:
- ▪ 6 credits of CPSC courses 300- or 400-level
  - ! CPSC 302 and 303 have additional prerequisites

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

### 4. PHYSICS & ASTRONOMY (PHAS) CMS PKG COURSES: (next page)

¹ All students planning to pursue the CPSC package should contact the CMS advisor/director as soon as possible.
- All PHYS and ASTR courses at the 300- or 400-level, except PHYS 348
  ASTR 300, 333, 403, 406, 407 (*have additional pre-requisites)

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, 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). 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. (No double-counting)

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) of CHEM 200 or higher (except: CHEM 300), or BIOL BIOL 121, 343, 345, 346, 438

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, 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>Arts Credits: includes arts courses at all year levels.</td>
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<td>12</td>
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<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>
</tr>
<tr>
<td>Upper-Level Science Credits: includes all Science courses at the 300-level and 400-level required for program.</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