# Combined Major in Science

**Mathematical sciences – Interface (any option, A - D), Earth and Environmental Sciences (EES), Physics & Astronomy – Astronomy (ASTR)**

<table>
<thead>
<tr>
<th>First Year</th>
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<tbody>
<tr>
<td></td>
<td>□ MATH 100 (or equiv.)</td>
<td>□ CPSC 110 or CPSC 111 (interface A, C, D)</td>
<td>□ EES* elective</td>
<td>□ PHYS 101 or 107 or 117 or 131</td>
<td>□ Communication (See page 2)</td>
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<tr>
<td></td>
<td>□ MATH 101 (or equiv.)</td>
<td>□ CPSC 121 (interface C only)</td>
<td>□ CHEM 121 or 120+115 or CHEM 111 or 110+115</td>
<td>□ PHYS 118 + 119 or 108+109</td>
<td>□ Communication (See page 2)</td>
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<td></td>
<td>□ STAT 200 (or equiv.)</td>
<td>□ CPSC 210 (interface C only)</td>
<td>□ MATH 217 (or 200 + 317)</td>
<td>□ PHYS 200</td>
<td>□ Arts (See page 2)</td>
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<td></td>
<td></td>
<td>□ MATH 215</td>
<td>□ MATH 221</td>
<td>□ PHYS 203</td>
<td>□ Arts (See page 2)</td>
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*EES Elective: one of ATSC 201, BIOL 111, BIOL 112, BIOL 121, GEOB 103, 200 or EOSC 110 and 111

## Second Year

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<tr>
<td></td>
<td>□ STAT 200 (or equiv.)</td>
<td>□ Computing req. (see p. 2) only Interface B</td>
<td>□ MATH 215</td>
<td>□ MATH 221</td>
<td>□ Arts (See page 2)</td>
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<td></td>
<td>□ CPSC 110 or CPSC 111 (interface A, C, D)</td>
<td>□ CPSC 121 (interface C only)</td>
<td>□ PHYS 200</td>
<td>□ PHYS 203</td>
<td>□ Arts (See page 2)</td>
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## Third and Fourth Years

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<tbody>
<tr>
<td></td>
<td>□ SCIE 300</td>
<td>□ Interface pkg Course 1</td>
<td>□ EOSC 340</td>
<td>□ PHYS 216</td>
<td>□ Arts (See page 2)</td>
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<td></td>
<td>(PHYS 219 + 229 recom.)</td>
<td>□ Interface pkg Course 2</td>
<td>□ EOSC 326, or 355, or 372</td>
<td>□ ASTR pkg Course 1 (3 cr)</td>
<td>□ Arts (See page 2)</td>
</tr>
<tr>
<td></td>
<td>□ Interface pkg Course 3</td>
<td>□ Interface pkg Course 1 (3 cr)</td>
<td>□ EES pkg course</td>
<td>□ ASTR pkg Course 2 (3 cr)</td>
<td>□ Arts (See page 2)</td>
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<td>□ Lab req. (See page 2)</td>
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### Third and Fourth Years

- SCIE 300
- Interface pkg Course 1
- EOSC 340
- PHYS 216
- ASTR pkg Course 1 (3 cr)
- Arts (See page 2)

### Third and Fourth Years

- Interface pkg Course 2
- EOSC 326, or 355, or 372
- EES pkg course
- ASTR pkg Course 2 (3 cr)
- Arts (See page 2)

### Third and Fourth Years

- Interface pkg Course 3
- Interface pkg Course 1 (3 cr)
- Interface pkg Course 2 (3 cr)
- Interface pkg Course 3 (3 cr)
- Interface pkg Course 4 (3 cr)

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### 1. 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
  - Two of: MATH/STAT 302, MATH 303, STAT 305
  - One of: CPSC 302, CPSC 303
- **Interface B** – Prerequisites: MATH 200, 221
  - All of: MATH/STAT 302, MATH 303, STAT 305
- **Interface C** – Prerequisites: CPSC 110 or 111, 121, 210 or, 221, MATH 200, 221
  - All of: CPSC 340, STAT 306, STAT 406
- **Interface D** – Prerequisites: CPSC 110 or 111, 121, 210 or, 221, MATH 200, 221
  - All of: CPSC 302, 402 (additional pre-requisites – check!), MATH 307

### 2. Earth and Environmental Sciences (EES) CMS PKG Courses:

- Recommended: another one of EOSC 324, 326*, 329, 330, 355, 372, 373, or GEOB 300*
3. PHYSICS (PHYS) CMS PKG COURSES:
   - All PHYS courses at the 300- or 400-level, except PHYS 348

4. ASTRONOMY (ASTR) CMS PKG COURSES:
   - ASTR 300, 333, 403, 406, 407

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
- 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, 103, 110, 111, 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 121, 343, 345, 346, 438, GEOB 307

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>
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<tbody>
<tr>
<td>Total Credits: includes all UBC courses, transf 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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<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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<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>
</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>32 – 38*</td>
</tr>
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* 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