

## COMBINED MAJOR IN SCIENCE

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

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

<b>First Year</b>	<input type="checkbox"/> MATH 100 (or equiv.)  <input type="checkbox"/> MATH 101 (or equiv.)	<input type="checkbox"/> CPSC 110 or CPSC 111 (Interface A, C, D)  <input type="checkbox"/> CPSC 121 (Interface C only)	<input type="checkbox"/> EES* elective  <input type="checkbox"/> CHEM 121 or 120+115 or CHEM 111 or 110+115	<input type="checkbox"/> PHYS 101 or 106 or 107 or 117 or 131  <input type="checkbox"/> PHYS 118 + 119 or 108+109	<input type="checkbox"/> Communication (See page 2)  <input type="checkbox"/> Communication (See page 2)
<b>Second Year</b>	<input type="checkbox"/> STAT 200 (or equiv.)  <input type="checkbox"/> Computing req. (see p. 2) only Interface B	<input type="checkbox"/> CPSC 210 (Interface C only)  <input type="checkbox"/> MATH 215	<input type="checkbox"/> MATH 217 (or 200 + 317)  <input type="checkbox"/> MATH 221	<input type="checkbox"/> PHYS 200  <input type="checkbox"/> PHYS 203	<input type="checkbox"/> Arts (See page 2)  <input type="checkbox"/> 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

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

<b>Third and Fourth Years</b>	<input type="checkbox"/> SCIE 300  <input type="checkbox"/> (PHYS 219 + 229 recom.)  <input type="checkbox"/> Generalist req. (see page 2)  <input type="checkbox"/> _____	<input type="checkbox"/> Interface pkg Course 1  <input type="checkbox"/> Interface pkg Course 2  <input type="checkbox"/> Interface pkg Course 3  <input type="checkbox"/> Lab req. (See page 2)	<input type="checkbox"/> EOSC 340  <input type="checkbox"/> EOSC 326, or 355, or 372  <input type="checkbox"/> EES pkg course  <input type="checkbox"/> _____	<input type="checkbox"/> PHYS 216  <input type="checkbox"/> ASTR pkg Course 1 (3 cr)  <input type="checkbox"/> ASTR pkg Course 2 (3 cr)  <input type="checkbox"/> PHYS pkg Course 1 (3 cr)	<input type="checkbox"/> Arts (See page 2)  <input type="checkbox"/> Arts (See page 2)  <input type="checkbox"/> _____  <input type="checkbox"/> _____
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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:

- Earth and Environmental Science courses 300- or 400-level: ATSC, ENVR, GEOS (except: GEOS 307, 407), EOSC (except: EOSC 310, 311, 314, 315, 371, 470, 471, 474, 475, 478).
- Recommended: another one of EOSC 324, 326\*, 329, 330, 355, 372, 373, or GEOS 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, CPSC111, CPSC 301, EOSC 211, PHYS 210, MATH 210, **and one of** STAT 200, STAT241, STAT251, BIOL300
- **BIOL 342** (2 cr) - Prerequisite: BIOL 121, 140/ 180
- **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, GEOS 307

### CMS GRADUATION CHECKLIST TABLE:

Review Upper Level B.Sc. Requirements:

<http://www.calendar.ubc.ca/vancouver/index.cfm?tree=12,215,410,1466>

CREDIT TOTALS	Completed	in Progress	Total	Required
<b>Total Credits:</b> includes all UBC courses, transf credits & advance credits. DO NOT count paired courses, COOP credits, or courses "not for credit in the Faculty of Science".				<b>120</b>
<b>Science Credits:</b> includes all required & elective Science courses at all year levels.				<b>72</b>
<b>Communication Credits:</b> 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				<b>6</b>
<b>Arts Credits:</b> includes arts courses at all year levels.				<b>12</b>
<b>Upper-Level Credits:</b> includes all courses at the 300-level and 400-level in any field (Arts, Science, and a maximum of 18 "Other" cr.).				<b>48</b>
<b>Upper-Level Science Credits:</b> includes all Science courses at the 300-level and 400-level required for program.				<b>32 – 38*</b>

\* 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>