

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	<input type="checkbox"/> MATH 100 (or equiv.)	<input type="checkbox"/> CPSC 110 or CPSC 111	<input type="checkbox"/> EES* elective	<input type="checkbox"/> PHYS 101 or 106 or 107 or 117 or 131	<input type="checkbox"/> Communication (See page 2)
	<input type="checkbox"/> MATH 101 (or equiv.)	<input type="checkbox"/> CPSC 121	<input type="checkbox"/> CHEM 121 or 120+115 or CHEM 111 or 110+115	<input type="checkbox"/> PHYS 118 + 119 or 108+109	<input type="checkbox"/> Communication (See page 2)
Second Year	<input type="checkbox"/> STAT 200 (or equiv.)	<input type="checkbox"/> CPSC 210 or CPSC 211	<input type="checkbox"/> MATH 217 (or 200)	<input type="checkbox"/> PHYS 200	<input type="checkbox"/> Arts (See page 2)
	<input type="checkbox"/> Computing Req. (see page 2)	<input type="checkbox"/> (CPSC 213 recom.)	<input type="checkbox"/> (MATH 215 recom.)	<input type="checkbox"/> (PHYS 219 + 229 recom.)	<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

Third and Fourth Years	<input type="checkbox"/> SCIE 300	<input type="checkbox"/> CPSC 221	<input type="checkbox"/> EOSC 340	<input type="checkbox"/> PHYS pkg Course 1 (3cr)	<input type="checkbox"/> Arts (See page 2)
	<input type="checkbox"/> _____	<input type="checkbox"/> CPSC pkg course 1	<input type="checkbox"/> EOSC 326, or 355, or 372	<input type="checkbox"/> PHAS pkg Course 1 (3 cr)	<input type="checkbox"/> Arts (See page 2)
	<input type="checkbox"/> Generalist req. (see page 2)	<input type="checkbox"/> CPSC pkg course 2	<input type="checkbox"/> EES pkg course	<input type="checkbox"/> PHAS pkg Course 2 (3 cr)	<input type="checkbox"/> _____
	<input type="checkbox"/> _____	<input type="checkbox"/> Lab req. (See page 2)	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

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:

- 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*
- 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

¹ All students planning to pursue the CPSC package should contact the CMS advisor/director as soon as possible.

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

- All PHYS and ASTR courses at the 300- or 400-level, except PHYS 348
Recommended: PHYS 301*, 304, 305, 309*, 312*, 314*, 315*, 318, 319*, 330, 333, 404, 405, 420;
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 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). 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 121, 343, 345, 346, 438

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
Total Credits: includes all UBC courses, transfer credits & advance credits. DO NOT count paired courses, COOP credits, or courses "not for credit in the Faculty of Science".				120
Science Credits: includes all required & elective Science courses at all year levels.				72
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				6
Arts Credits: includes arts courses at all year levels.				12
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.).				48
Upper-Level Science Credits: includes all Science courses at the 300-level and 400-level required for program.				32 – 38*

* 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>