

COMBINED MAJOR IN SCIENCE

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

Chemistry (CHEM), Earth and Environmental Sciences (EES),
Mathematical Science – MATH

First and Second Year

First Year	<input type="checkbox"/> MATH 100 (or equiv)	<input type="checkbox"/> CHEM 121 (111)	<input type="checkbox"/> PHYS 101 or 107	<input type="checkbox"/> EES* elective	<input type="checkbox"/> Communication (See page 2)
	<input type="checkbox"/> MATH 101 (or equiv)	<input type="checkbox"/> CHEM 123 (113)	<input type="checkbox"/> (<i>EOSC 114 Recom</i>)	<input type="checkbox"/> _____	<input type="checkbox"/> Communication (See page 2)
Second Year	<input type="checkbox"/> STAT 200	<input type="checkbox"/> CHEM 233, 235	<input type="checkbox"/> (<i>MATH 215 Recom</i>)	<input type="checkbox"/> MATH 200	<input type="checkbox"/> Arts (See page 2)
	<input type="checkbox"/> Computing Requirement (see page 2)	<input type="checkbox"/> CHEM 205	<input type="checkbox"/> _____	<input type="checkbox"/> MATH 221	<input type="checkbox"/> 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).

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

3rd/4th Years	<input type="checkbox"/> SCIE 300	<input type="checkbox"/> CHEM 341	<input type="checkbox"/> EOSC 340	<input type="checkbox"/> MATH pkg course	<input type="checkbox"/> Arts (See page 2)
	<input type="checkbox"/> _____	<input type="checkbox"/> CHEM pkg course	<input type="checkbox"/> EOSC 326, 355, or 372	<input type="checkbox"/> MATH pkg course	<input type="checkbox"/> Arts (See page 2)
3rd/4th Years	<input type="checkbox"/> Generalist Requirement (see page 2)	<input type="checkbox"/> CHEM pkg course	<input type="checkbox"/> EES pkg course	<input type="checkbox"/> MATH pkg course	<input type="checkbox"/> _____
	<input type="checkbox"/> _____	<input type="checkbox"/> Lab Requirement (See page 2)	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

CMS PACKAGES:

1. CHEMISTRY (CHEM) CMS PACKAGE:

- CHEM 341 (3)
- 6 credits CHEM courses 300- or 400-level

2. 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*

3. MATHEMATICAL SCIENCES (MASC) – MATH CMS PACKAGE:

- 9 credits 300- and 400-level MATH
- Highly Recommended: MATH 302, 307, 317, 340, 360
- Recommended*: MATH 303, 316, 345, 361, 441, 442, 445

* additional prerequisites might be required for these courses.

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** (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

CMS 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:
Life Science: BIOL 121, 343, 345, 346, 438
Physics and Astronomy: ASTR 200, PHYS 200, 305, 330, 333.

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, 112 (recommended), 120, 121; SCIE 113; SCIE 300 or CHEM 300; APSC 176; ASTU 100, 150; or WRDS 150; their equivalents				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>