

# COMBINED MAJOR IN SCIENCE

<http://www.cms.science.ubc.ca/home>  
 Computer Science (CPSC), Life Sciences (LSC),  
 Physics (PHYS)

## First and Second Year

|                    |   |   |  |  |  |
|--------------------|---|---|--|--|--|
| <b>First Year</b>  | <input type="checkbox"/> MATH 100<br>(or equiv)                   | <input type="checkbox"/> CHEM 121<br>(or CHEM 111)                  | <input type="checkbox"/> PHYS 101<br>(or PHYS107)            | <input type="checkbox"/> CPSC 110<br>(or CPSC 111) | <input type="checkbox"/> Communication<br>(See page 2) |
|                    | <input type="checkbox"/> MATH 101<br>(or equiv)                   | <input type="checkbox"/> BIOL 121 +<br>BIOL 140                     | <input type="checkbox"/> PHYS 118<br>& 119 (or<br>108 & 109) | <input type="checkbox"/> CPSC 121                  | <input type="checkbox"/> Communication<br>(See page 2) |
| <b>Second Year</b> | <input type="checkbox"/> STAT 200                                 | <input type="checkbox"/> PHYS 200                                   | <input type="checkbox"/> CPSC 210<br>(or CPSC 211)           | <input type="checkbox"/> BIOL 112                  | <input type="checkbox"/> Arts<br>(See page 2)          |
|                    | <input type="checkbox"/> Computing<br>Requirement<br>(see page 2) | <input type="checkbox"/> (PHYS 219 /<br>PHYS 229<br><i>Recom.</i> ) | <input type="checkbox"/> MATH 200                            | <input type="checkbox"/> BIOL200                   | <input type="checkbox"/> Arts<br>(See page 2)          |

Note: MATH 215 (or 225), MATH 217 (or 227 or 317), CPSC213, and BIOL 201 recommended

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

|  |  |   |   |  |   |
|--|--|---|---|--|---|
| <b>3<sup>rd</sup>/4<sup>th</sup> Years</b> | <input type="checkbox"/> SCIE 300                                  | <input type="checkbox"/> PHYS 301,<br>304, or 333           | <input type="checkbox"/> CPSC 221           | <input type="checkbox"/> LSC pkg<br>course | <input type="checkbox"/> Arts<br>(See page 2) |
|  | <input type="checkbox"/> _____                                     | <input type="checkbox"/> PHYS pkg<br>course                 | <input type="checkbox"/> CPSC pkg<br>course | <input type="checkbox"/> LSC pkg<br>course | <input type="checkbox"/> Arts<br>(See page 2) |
|  | <input type="checkbox"/> Generalist<br>Requirement<br>(see page 2) | <input type="checkbox"/> PHYS pkg<br>course                 | <input type="checkbox"/> CPSC pkg<br>course | <input type="checkbox"/> LSC pkg<br>Course | <input type="checkbox"/> _____                |
|  | <input type="checkbox"/> _____                                     | <input type="checkbox"/> Lab<br>Requirement<br>(see page 2) | <input type="checkbox"/> _____              | <input type="checkbox"/> _____             | <input type="checkbox"/> _____                |

## CMS PACKAGES:

### 1. LIFE SCIENCES (LSC) CMS PACKAGE:

- 9 credits Life Science courses 300- or 400-level  
Life Science courses include: CAPS 301, 390, 391, BIOC, BIOL (except BIOL 300), GEOB 307, 407, MRNE, MEDG, MICB, PCTH, PHYL, PSYC 360-368, PSYC 460-462, and EOSC 470, 471, 474, 475, 478

### 2. MATHEMATICAL SCIENCES – COMPUTER SCIENCE (CPSC) CMS PACKAGE

- CPSC 221
- 6 credits 300- or 400-level CPSC  
Recommended: CPSC 302\*, 303\*, 304, 312, 314, 320, 322, 340, 402, 406, 420, 421, 422, 430, 445  
\*additional prerequisites

**Note:** Students choosing this package may need additional upper-level Science credits to meet the requirement for a minimum of 30 upper-level science credits.

### 3. PHYSICS (PHYS) CMS PACKAGE:

- 3 credits of PHYS 301\*, 304\*, 333
- 6 credits PHYS or ASTR courses 300- or 400-level  
Recommended Courses: PHYS 301\*, 304\*, 305\*, 309\*, 312\*, 314\*, 315\*, 318\*, 319\*, 330, 333, 404\*, 405, 420

\*Other Prerequisites in addition to 1<sup>st</sup>/2<sup>nd</sup> year Core.

## **LOWER LEVEL REQUIREMENTS:**

<http://www.calendar.ubc.ca/vancouver/index.cfm?tree=12,215,410,1465>

## **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

## **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:
  - Chemistry: CHEM 200-level
  - Earth Science: EOSC 340, 326, 477, 453, 354, 329, GEOB 400

## **GRADUATION CHECKLIST TABLE FOR CMS**

| <b>CREDIT TOTALS</b>  | <b>Completed</b> | <b>in Progress</b> | <b>Total</b> | <b>Required</b> |
|---|------------------|--------------------|--------------|-----------------|
| <b>Total Credits:</b> 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”.   |                  |                    |              | <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, 112 (recommended), 120, 121; SCIE 113; SCIE 300 or CHEM 300; APSC 176; ASTU 100, 150; or WRDS 150; their equivalents |                  |                    |              | <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, both required and elective credits 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>