## COMBINED MAJOR IN SCIENCE

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

Mathematical sciences - Statistics (STAT), Life Sciences (LSC), Physics & Astronomy – Physics (PHYS)

### First Year
- **MATH 100** (or equiv.)
- **MATH 101** (or equiv.)
- **CHEM 121** or 120+115 or **CHEM 111** or 110+115
- **CHEM 123** or 130+135
- **BIOL 112**
- **BIOL 121** + **BIOL 140/180**
- **PHYS 101** or 107 or 117 or 131
- **PHYS 118** + 119 or 108+109
- Communication (See page 2)

### Second Year
- **STAT 200** (or equiv.)
- **MATH 152** OR 221 OR 223
- **MATH 217** (or 200)
- **PHYS 200**
- Computing req. (see page 2)
- Communication (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
- **SCIE 300**
- **STAT 300** *(PHYS 219 + 229 recom.)*
- **LSC pkg Course 1**
- **PHYS pkg Course 1 (3cr)**
- **Arts** (See page 2)

- **Generalist req.** (see page 2)
- **Lab req.** (See page 2)
- **PHAS pkg Course 2 (3 cr)**

### 1. MATHEMATICAL SCIENCES (MASC) - MATH CMS PKG COURSES:
- MATH courses at the 300- or 400-level; recommended: MATH 302, 307, 317, 340, 360
- ! Some courses may have additional pre-requisites!
Pay particular attention to the credit-exclusion list (UBC calendar)

### 2. LIFE SCIENCES (LSC) CMS PKG COURSES:
- Courses at the 300- or 400-level in CAPS, BIOC, BIOL (except: BIOL300, 344, 345, 346, 448), MICB, MRNE, MEDG, PCTH; as well as GEOS 307, 407, EOSC 470, 471, 474, 475, 478, PSYC 360-371 and 460 - 472.

### 3. PHYSICS (PHYS) CMS PKG COURSES:
- All PHYS courses at the 300- or 400-level, except PHYS 348

### 4. PHYSICS & ASTRONOMY (PHAS) CMS PKG COURSES:
- All PHYS and ASTR courses at the 300- or 400-level, except PHYS 348
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, 140/180
- **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.

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), EOSC 340, 326, 477, 453, 354, 329

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>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Credits</strong></td>
<td></td>
<td></td>
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<td>120</td>
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<tr>
<td>includes all UBC courses, transfer credits &amp; advance credits. DO NOT count paired courses, COOP credits, or courses “not for credit in the Faculty of Science”.</td>
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<tr>
<td><strong>Science Credits</strong></td>
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<td>72</td>
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<td>includes all required &amp; elective Science courses at all year levels.</td>
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<td><strong>Communication Credits</strong></td>
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<td>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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<td><strong>Arts Credits</strong></td>
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<td>includes arts courses at all year levels.</td>
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<tr>
<td><strong>Upper-Level Credits</strong></td>
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<td>48</td>
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<td>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><strong>Upper-Level Science Credits</strong></td>
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<td>32 – 38*</td>
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<td>includes all Science courses at the 300-level and 400-level required for program.</td>
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</table>

* 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