COMBINED MAJOR IN SCIENCE
http://www.cms.science.ubc.ca/home
Chemistry (CHEM), Mathematical Sciences (MASC) - Mathematics, 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
- **Physics Computing Req. (see page 2)**
- **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 215 recom.**
- **CHEM 233 +235 or CHEM 203 or 223+225**
- **CHEM 205 or 208 or 213 or 211 or 210+215**
- **MATH 217** (or 200)
- **MATH 221**
- **PHYS 200**
- **PHYS 219 + 229 recom.**
- **Arts** (See page 2)

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

**Third and Fourth Years**
- **SCIE 300**
- **CHEM 341**
- **CHEM pkg Course 1**
- **MATH pkg Course 1**
- **MATH pkg Course 2**
- **MATH pkg Course 3**
- **PHYS pkg Course 1 (3 cr)**
- **PHAS pkg Course 1 (3 cr)**
- **PHAS pkg Course 2 (3 cr)**
- **Arts** (See page 2)

1. **CHEMISTRY (CHEM) CMS PKG COURSES:**
   - 6 credits CHEM courses 300- or 400-level (except: CHEM 300, CHEM 348)

2. **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)

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, STAT 241, STAT 251, BIOL 300
- **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 BIOL 112, 121, 345, 346, 438, EOSC 340, 326, 477, 453, 354, 329, GEOS400

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>Total Credits: 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>
<td></td>
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<td>120</td>
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<tr>
<td>Science Credits: includes all required &amp; elective Science courses at all year levels.</td>
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<td>72</td>
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<tr>
<td>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</td>
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<td>6</td>
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<tr>
<td>Arts Credits: includes arts courses at all year levels.</td>
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<td>12</td>
</tr>
<tr>
<td>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.).</td>
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<td>48</td>
</tr>
<tr>
<td>Upper-Level Science Credits: includes all Science courses at the 300-level and 400-level required for program.</td>
<td></td>
<td></td>
<td></td>
<td>32 – 38*</td>
</tr>
</tbody>
</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