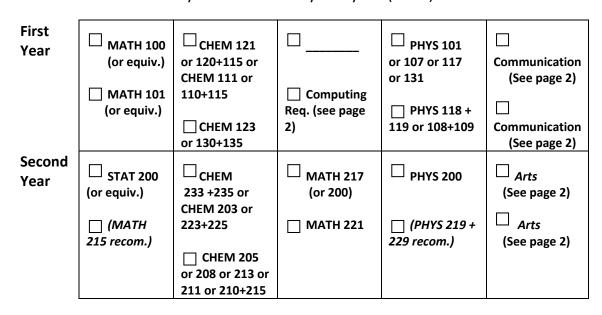
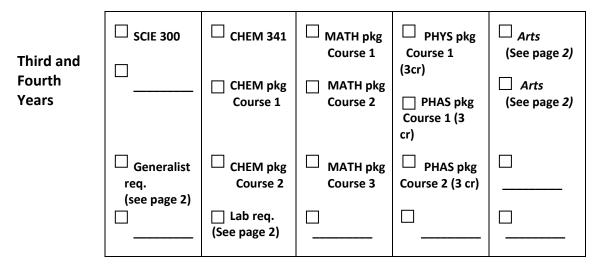
# **COMBINED MAJOR IN SCIENCE**

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

Chemistry (CHEM), Mathematical Sciences (MASC) - Mathematics, Physics & Astronomy – Physics (PHYS)



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



#### 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
- I 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
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.

### 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:** 

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       |           |             |       | 120      |
| credits & advance credits. DO NOT count paired          |           |             |       |          |
| courses, COOP credits, or courses "not for credit in    |           |             |       |          |
| the Faculty of Science".                                |           |             |       |          |
| Science Credits: includes all required & elective       |           |             |       | 72       |
| Science courses at all year levels.                     |           |             |       |          |
| Communication Credits: six credits from ENGL 100,       |           |             |       |          |
| 110, 111, 120, 121; SCIE 113 (recommended);             |           |             |       |          |
| CHEM 300; APSC 176; ASTU 100, 150; or WRDS 150          |           |             |       | 6        |
| (recommended); their equivalents; SCIE 300 is           |           |             |       |          |
| required for the CMS program                            |           |             |       |          |
| Arts Credits: includes arts courses at all year levels. |           |             |       | 12       |
| Upper-Level Credits: includes all courses at the        |           |             |       | 48       |
| 300-level and 400-level in any field (Arts, Science,    |           |             |       |          |
| and a maximum of 18 "Other" cr.).                       |           |             |       |          |
| Upper-Level Science Credits: includes all Science       |           |             |       | 32 – 38* |
| courses at the 300-level and 400-level required for     |           |             |       |          |
| program.  |           |             |       |          |

\* 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