

# ATSC MAJOR – even year start

## Minimum credits for degree: 120 (version: JULY 2014)

Year 3 and Year 4 courses in this guide assume that you took ATSC 201 and declared ATSC as your major in the fall of an even year (2014, 2016, etc.) so that your first 3<sup>rd</sup> year, term 1 ATSC class occurs in an odd year (2015, 2017, etc.)

FAMILY NAME: _____	GIVEN NAME: _____
STUDENT NUMBER: _____	E-MAIL: _____
TELEPHONE: _____	DATE PREPARED: _____

**PLEASE NOTE:** This is a **GUIDELINE ONLY**. **YOU** are responsible for checking that you meet all requirements explained in detail in the UBC CALENDAR and with the SCIENCE INFORMATION CENTRE for the MOST up-to-date regulations!!

**NOTE:** Refer to the UBC “credit exclusion lists” in the calendar before completing.

### TO REGISTER IN ATSC MAJOR

Requires an application to the Faculty of Science normally prior to registration in the summer following yr1 or, for transfer students, before you first register for courses. Early contact with an EOAS advisor to discuss intended specialization, is recommended. **NOTE: YOU must meet all graduation requirements within 180 credits.** Those who do not will be required to withdraw from the FoS.

### I) FIRST-YEAR REQUIREMENTS:

COURSES	CREDIT	COURSES TAKEN	Total
ENGL*1 100 LEVEL (Communication: 6cr required by end of 3 <sup>rd</sup> year)	6		/ 6
PHYS*2 101 or 107 (Energy and Waves)	3		/ 3
PHYS 108/(109) or 102*3 (Elec. Light & Radiation)	3(4)		/ 3
CHEM 121 or 111 (Structural Chemistry)	4		/ 4
CHEM 123 or 113 (Organic Chemistry)	4		/ 4
MATH 100 / 102 / 104 or equivalents (Differential Calculus)	3		/ 3
MATH 101 / 103 / 105 or equivalents (Integral Calculus)	3		/ 3
Elective	4(3)		/ 3
<b>TOTAL CREDITS</b>			<b>/ 30</b>

**NOTE: You must have two lab-based courses in your first year courses.**

\*1 A total of 6 credits of coursework are required to meet the Communication Requirement. For full list of acceptable courses, see Communication Requirement in the UBC calendar. **NOTE: Communication courses CANNOT be used towards the 12 Credit Arts Requirement. 6cr must be completed by the end of year 3.**

\*2 Students without Physics 12 must normally take PHYS 100 before PHYS 101. Qualified students are encouraged to take PHYS 107.

\*3 Students without Biology 11 or 12 must ALSO take 3 credits of 100-level BIOL.

\*4 ATSC Electives: ATSC 409, 414; CHEM 302; EOSC 340, 354, 372; GEOB 400, 401, 402; PHYS 314

**NOTE:** only 3 credits of lower-level requirements may be carried beyond the first 60 credits; ENGL and MATH 100 (and equivalents) may not be deferred.

### PROMOTION BEYOND FIRST YEAR

See the calendar for information on FoS promotion requirements:  
<http://www.calendar.ubc.ca/vancouver/index.cfm?tree=12,215,410,1467>

- Check that you meet promotion requirements contact the FoS, Science Information Centre.

- **NOTE:** YOU must meet all graduation requirements within 180 credits. Those who do not will be required to withdraw from the Faculty of Science.

## II) Even Second Year (2014, 2016, etc.)

COURSES	CREDIT	COURSES TAKEN	Total
ATSC 201 (Meteorology of Storms)	3		/ 3
CPSC 110, CPSC 189 (Computation/Python)	5		/ 5
EOSC 211 (Computer methods)	3		/ 3
EOSC 250 (Fields and fluxes)	3		/ 3
MATH 200 (Calculus III)	3		/ 3
MATH 215 (Elementary differential equations)	3		/ 3
MATH 221 (Matrix algebra)	3		/ 3
STAT 200 or 241 (Introductory Statistics)	3		/3
Elective	4		/ 4
<b>TOTAL CREDITS</b>			<b>/ 30</b>

\*

## III) Odd third year (2015, 2017, 2019)

Bold courses marked with a \*\* are only offered every second year

PHYS 203 and ATSC 405 taken in term 2

PHYS 312 or MATH 316 taken in term 1 (pre-req for ATSC 404)

COURSES	CREDIT	COURSES TAKEN	Total
<b>**ATSC 405 (Cloud physics, PHYS 203 co-req)</b>	<b>3</b>		<b>/ 3</b>
PHYS 203 (thermodynamics)	3		/ 3
PHYS 312 or MATH 316 (partial differential equations)	3		/ 3
<b>**ATSC 404 (Atmospheric dynamics, partial diff eqn. prereq)</b>	<b>3</b>		<b>/ 3</b>
ATSC 406 (Operational meteorology)	3		/ 3
GEOB 300 (Microscale weather)	3		/ 3
ATSC electives ( <b>**ATSC 409</b> offered this year)	3		/ 3
ENVR 300 (Environmental Science)	3		/ 3
Electives	6		/ 6
<b>TOTAL CREDITS</b>			<b>/ 30</b>

#### IV) Even fourth year (2016, 2018, 2020)

\*

COURSES	CREDIT	COURSES TAKEN	Total
<b>**ATSC 301</b> (Radiation and Remote Sensing, even years)	3		/ 3
<b>**ATSC 303</b> (Instruments)	3		/ 3
ATSC electives ( <b>**ATSC 414</b> offered this year, part. diff eqn. pre-req)	3		/ 3
ENVR 300 (Environmental Science)	3		/ 3
Electives or remaining required courses	18		/18
<b>TOTAL CREDITS</b>			<b>/ 30</b>

#### IV). OTHER ELECTIVES:

**REMEMBER** you still require a total of 48 300+ cr to graduate – see over.

##### A. ADDITIONAL COMMUNICATION REQUIREMENT

NOTE: All communication requirements (6cr) must be completed by the end of Year 3.

COURSE NUMBER	COURSE NAME and NUMBER
1 Communication: Credit*1 1XX	
<b>TOTAL CREDIT</b>	<b>/ 6 (total of 6 required)</b>

##### B. 12 CREDITS ARTS (Communication credits cannot be used for this requirement)

COURSE NUMBER	COURSE NAME and NUMBER
1 ANY 100+	
2 ANY 100+	
3 ANY 100+	
4 ANY 100+	
<b>TOTAL CREDIT</b>	<b>/ 12</b>

##### C. 6 CREDITS ATSC ELECTIVES

COURSE NUMBER	COURSE NAME and NUMBER
See footnote 4 above	
<b>TOTAL CREDIT</b>	<b>/ 6</b>

**D. FoS MAJORS BREADTH REQUIREMENT: 9 CREDITS** in additional arts and / or science, **CANNOT INCLUDE** EOSC(OCGY) / GEOB/ PHYS (may include a mix of Arts / Science, BUT CANNOT BE IN ANOTHER FACULTY). See Science Information Centre for more information.

COURSE NUMBER	COURSE NAME and NUMBER
1 ANY 100+ (arts / science only – see restrictions (D))	
2 ANY 100+ (arts / science only – see restrictions (D))	
3 ANY 100+ (arts / science only – see restrictions (D))	
<b>TOTAL CREDIT</b>	<b>/ 9</b>

E. 13 additional elective credits – 18 total credits may be in faculties other than Science or Arts

**NOTE: Although these can be at 100 level, you STILL need 48 x 300+ credits total!**

COURSE NUMBER	CREDITS	
	FACULTY OF SCIENCE / ARTS	ANY OTHER FACULTY
1. ANY 100+ *		
2. ANY 100+		
3. ANY 100+		
4. ANY 100+		
<b>SUB TOTALS</b>		
<b>GRAND TOTAL</b>	<b>/ 13</b>	

## **IMPORTANT: FoS REQUIREMENTS**

YOU MUST ALSO MEET THE FOLLOWING FACULTY of SCIENCE REQUIREMENTS:

**NOTE: YOU must meet ALL graduation requirements WITHIN 180 credits.**  
*Those who do not will be required to withdraw from the Faculty of Science.*

CREDITS	YOUR COUNT	FOS REQUIREMENTS
TOTAL		120
TOTAL 300+ (any subject)		48* (see note below)
TOTAL 300+ SCIENCE		30
TOTAL SCIENCE		72
TOTAL ARTS		12
TOTAL COMMUNICATION		6
MIN BREADTH (see IV/D)		9
MAX NOT IN ARTS / SCIENCE		18**

\* If this is your 2<sup>nd</sup> degree, **NONE** of the 300+ courses from your 1<sup>st</sup> degree count towards this 48cr!  
**NOTE: it is at the discretion of the FOS how many (if any!) credits will transfer: contact the Science Information Centre for more information if you are in this situation: [advising@science.ubc.ca](mailto:advising@science.ubc.ca)**  
**\*\* you are not required to have any courses out of arts of science, but you can take up to 18cr if you do**

## **OTHER IMPORTANT NOTES**

**DIRECTED STUDIES (EOSC 448):** If used for atsc specialization requirements topics must be approved by an EOAS department advisor. We would **prefer** a maximum of 6 credits in your atsc major. More may be possible with consultation of department and faculty advisors.

**GRADUATE CLASSES:** You may take a maximum of 6 credits of graduate courses (500 level). Permission must be sought from the Faculty of Science AND the Faculty of Graduate Studies (contact the Science Information Centre for info.)

. Any uncertainties should be directed to APEGBC and are the responsibility of each individual student.

### **ADVISORS**

Advisors will not be in their office at all times. Please make an appointment to confirm availability. We may be away on fieldwork or on other business that could put us out of reach of email. For an emergency, contact the EOAS undergraduate coordinator: Alicia Cairns: ESB 2020, 604-827-5284, [acairns@eos.ubc.ca](mailto:acairns@eos.ubc.ca)

**PLEASE USE E-MAIL** to set up appointments or ask general questions. Place 'advising' in the subject field **AND INCLUDE YOUR FULL NAME AND STUDENT NUMBER** on ALL communications.

Dr. Roland Stull: [rstull@eos.ubc.ca](mailto:rstull@eos.ubc.ca): 604 822 5901; EOS-South 158

Dr. Philip Austin: [paustin@eos.ubc.ca](mailto:paustin@eos.ubc.ca): 604 822-2175; EOS-South 157

For more advising information, visit: <http://www.eos.ubc.ca/academic/undergraduate/advice.html>