



GUIDELINES FOR BACHELOR OF SCIENCE ENVIRONMENTAL CHEMISTRY MAJOR

HIGH SCHOOL PREREQUISITES

ENGLISH			
IF YOU TOOK	YOUR GRADE		CHOOSE
English Studies 12 or English First Peoples 12 or	73% or higher	→	ENGL 1100 (recommended) or ENGL 1110 or ENGL 1120 or ENGL 1140 or 1150 or ENGL 1210
ESAL 0570 and 0580 or	65% or higher		
ENGL 0600 or ENGL 0620	65% or higher		
English Studies 12 or English First Peoples 12	Below 73%	→	ACCUPLACER Assessment or ENGL 0600 or 0620
BIOLOGY			
IF YOU TOOK	YOUR GRADE		CHOOSE
Life Sciences 11 or Biology 11 or Anatomy & Physiology 12 or Biology 12 AND Chemistry 11	67% or higher	→	BIOL 1110 AND 1210
Life Sciences 11 or Biology 11	Below 67%	→	BIOL 0500
IF YOU NEED			
Life Sciences 11 or Biology 11		→	BIOL 0500
Chemistry 11		→	CHEM 0500
CHEMISTRY			
IF YOU TOOK	YOUR GRADE		CHOOSE
Chemistry 11 AND Pre-Calculus 12	67% or higher (recommended)	→	CHEM 1500 AND 1510
Chemistry 12 AND Pre-Calculus 12	73% or higher (recommended)	→	CHEM 1500 AND 1520
IF YOU NEED			
Chemistry 11		→	CHEM 0500
Chemistry 12		→	CHEM 0600
Pre-Calculus 12		→	SEE MATH SECTION BELOW
PHYSICS			
IF YOU TOOK	YOUR GRADE		CHOOSE
Physics 11 AND Pre-Calculus 12	67% or higher	→	PHYS 1100 AND 1200
Physics 12 AND Pre-Calculus 12	67% or higher	→	PHYS 1150 AND 1250
Physics 11	Below 67%	→	PHYS 0500
IF YOU NEED			
Physics 11		→	PHYS 0500
Physics 12		→	PHYS 0600
Pre-Calculus 12		→	SEE MATH SECTION BELOW

MATH – EVERY SCIENCE MAJOR REQUIRES 6 CREDITS OF FIRST-YEAR CALCULUS

IF YOU TOOK	YOUR GRADE		CHOOSE
Pre-Calculus 12	67% or higher (within the last 2 years)	➡	One of the following streams: MATH 1140 AND 1240 MATH 1150 AND 1250
Pre-Calculus 12	Below 67% (within the last 2 years)	➡	MATH 1000 or 0630 or 0600 + 0610
Foundations 12	All grades	➡	MATH 0510 + MATH 0600 + MATH 0610

MATH 1140/1240 is recommended for all Science Majors
MATH 1150/1250 is recommended for all Biology Majors

PLEASE NOTE: For all high school courses with no required grade listed, 67% or higher is highly recommended.

For best chances of academic success, completion of the grade 12 level of the subject area of your intended major is recommended. (e.g. for a Physics major, you should have Grade 12 Physics). High school equivalent courses can be taken or repeated at TRU.

SUGGESTED FIRST- AND SECOND-YEAR PLAN

YEAR 1

FALL SEMESTER	WINTER SEMESTER
ENGL 1100 or 1110	ENGL 1100 or 1110 or 1120 or 1140 or 1210
CHEM 1500	CHEM 1520 (preferred) or 1510
MATH 1140 or 1150	MATH 1240 or 1250
BIOL 1210	BIOL 1110
PHYS 1100 or 1150	PHYS 1200 or 1250

YEAR 2

FALL SEMESTER	WINTER SEMESTER
CHEM 2120	CHEM 2220
CHEM 2160	CHEM 2250
CHEM 2100	CMNS 2300 or 2290
MATH 2110	BIOL 3000 (preferred) or STAT 2000
COMP (3 credits) (see note #4 next page)	Non-Science Elective

COURSE OFFERINGS – 1000/2000 level

Note: Many science and math courses are offered in Fall **or** Winter semester only.

FALL SEMESTER ONLY	WINTER SEMESTER ONLY
CHEM 1500	CHEM 1510 or 1520
CHEM 2100	CHEM 2250
CHEM 2120	CHEM 2220
CHEM 2160	CMNS 2300
MATH 1150	MATH 1250
MATH 2110	BIOL 1110
BIOL 1210	PHYS 1250
PHYS 1150	

Bachelor Of Science ENVIRONMENTAL CHEMISTRY MAJOR Checksheet (120 credits)

1000-Level CORE courses (30-33 credits)			2000-Level CORE courses (24 credits)			3000/4000-Level (48 credits)		
COURSE		GRADE	COURSE		GRADE	COURSE		GRADE
ENGL 1100 or 1110 ²	_____	_____	CHEM 2120 - Organic Chemistry 1		_____	CHEM 3010 - Aqueous Environmental Chemistry		_____
ENGL 1100, 1110 or 1210 ²	_____	_____	CHEM 2220 - Organic Chemistry 2		_____	CHEM 3020 - Atmospheric Environment		_____
CHEM 1500 - Chemical Bonding/Organic Chem		_____	CHEM 2100 - Introductory Analytical Chemistry		_____	CHEM 3060 - Physical Chemistry 1		_____
CHEM 1510 or 1520	_____	_____	CHEM 2160 Structure, Bonding & Spectroscopy		_____	CHEM 3070 - Physical Chemistry 2		_____
BIOL 1110 - Principles of Biology 1		_____	CHEM 2250 - Fundamentals of Physical		_____	CHEM 3080 - Physical Chemistry Laboratory		_____
BIOL 1210 - Principles of Biology 2		_____	MATH 2110 - Calculus 3		_____	CHEM 3100 ⁵ - Instrumental Analysis		_____
MATH 1140 (or 1150)- Calculus 1	_____	_____	STAT 2000 or BIOL 3000		_____	CHEM 3120 ⁵ - Instrumental Analysis Lab		_____
MATH 1240 (or 1250)- Calculus 2	_____	_____	CMNS 2290 or 2300 ²		_____	CHEM 3140 - Applied Analytical Chemistry		_____
PHYS 1100 or 1150	_____	_____	ELECTIVES (15-18 credits)			CHEM 3220 - Advanced Organic Chemistry		_____
PHYS 1200 or 1250	_____	_____	COURSE		GRADE	CHEM 3230 - Organic Spectroscopy		_____
COMP 3 credits ^{1,4}	_____	_____	Non-science elective ³		_____	CHEM 3240 - Organic Chemistry Laboratory		_____
Notes: 1. Must be taken prior to third-year. 2. Students with less than a B grade in their first-year English courses are required to take another 3 credits of first year English 1110 or 1210 before their second year English requirement. Students with a grade B or better in ENGL 1100 or 1110 may proceed to either of the required CMNS 2290 or 2300 in their second year. 3. Non-Science electives must be in at least two different subject areas (other than English). 4. The 3 credits of COMP: suggest: 3 of COMP 1020, 1030, 1050, 1070, 1080, 1150 OR COMP 1110 OR COMP 1130. 5. These 3000 level courses must be taken in the fall semester of third year. 6. CHEM 4600 is offered in winter semester of alternate "odd" years. 7. CHEM 4220 and CHEM 4320 are offered in winter semester of "even" years. 8. CHEM 3730 is equivalent to BIOL 3130. CHEM 3730 is required.	Non-science elective ³		_____	_____	CHEM 3310 - Inorganic Chemistry 1		_____	
	Non-science elective ³		_____	_____	CHEM 3320 - Inorganic Chemistry 2		_____	
	Elective in lieu of 2 nd ENGL ²		_____	_____	CHEM 3330 - Inorganic Chemistry Laboratory		_____	
	General elective (1000-4000 level)		_____	_____	CHEM 3730 ⁸ - Introduction to Biochemistry		_____	
	General elective (1000-4000 level)		_____	_____	CHEM 4400 - Advanced Analytical Chemistry Lab		_____	
	Electives: Institutional Learning Outcomes (ILOs) may be required to graduate. Refer to the Degree Works website for more information.		1 of CHEM 4070, 4090, 4220 ⁷ , 4320 ⁷ or 4600 ⁶		_____	_____		
			1 of CHEM 4410, 4420 or 4430		_____	_____		
			Two 3000/4000 level Environ. CHEM electives (Approved by Chair)		_____	_____		
*NEW Institutional Learning Outcomes (ILO) Requirements – your Degree Works Program Plan is available through myTRU								
KEEP IN MIND								
This form is meant to be used as a guideline in conjunction with the TRU Academic Calendar and Course Schedule . Please see these resources for more about course prerequisites and co-requisites.								

KEEP IN MIND

Institutional Learning Outcomes (ILOs):

May be required for your program. Using the **Degree Works** planning tool will help you identify which courses apply.

Degree Works Planning Tool:

More information is available through the Degree Works website at: tru.ca/current/academic-supports/degreeworks

BACHELOR OF SCIENCE – FIRST- AND SECOND-YEAR NON-SCIENCE ELECTIVES

Anthropology (ANTH)	All	Linguistics (LING)	All
Archaeology (ARCH)	All	Management (MNGT)	1710
Accounting (ACCT)	2210, 2250	Marketing (MKTG)	2430
Business Law (BLAW)	2910	Modern Languages (MLAN)	All
Chinese (CHIN)	1110, 1210	Music (MUSI)	All
Communications (CMNS)	All	Organizational Behaviour (ORGB)	2810
Creative Writing (CRWR)	All	Philosophy (PHIL)	All
Economics (ECON)	All	Physical Education (PHED) non-Activity	1000, 1230, 2110, 2130, 2140, 2210
French (FRAN)	All	Political Studies (POLI)	All
Film (FILM)	All	Psychology (PSYC)	All
Finance (FNCE)	2120	Service & Community Learning (SRCL)	1000
First Nation Language (FNLG)	All	Sociology (SOCL)	All
Geography (GEOG) (non-physical)	1010, 1100, 1110, 2110, 2120, 2220, 2230 (excluded: GEOG 1000, 2020)	Spanish (SPAN)	All
German (GERM)	All	Speech (SPEE)	1500, 2500
History (HIST)	All 1000 level & 2000 level	Student Success (STSS)	1010, 1020
Human Resource Management (HRMN)	2820	Theatre (THTR)	All
Indigenous Studies (INDG)	2100	Visual Arts (VISA) (Theory)	All
Japanese (JAPA)	All	Visual Arts (VISA) (Studio)	All
Journalism (JOUR)	2010		