



Name:	TRU#
Advisor:	Date:
Major: CMMB MAJOR	Minor:

Bachelor Of Science CELLULAR, MOLECULAR & MICROBIAL BIOLOGY (CMMB) MAJOR Checksheet (120 credits)

1000-Level CORE courses (33 credits)		2000-Level CORE courses (24 credits)		3000/4000-Level (42 credits)	
COURSE	GRADE	COURSE	GRADE	COURSE	GRADE
ENGL 1100 or 1110 ^{1,2}		BIOL 2130 - Cell Biology		BIOL 3000 - Biometrics	
ENGL 1100 ,1110, 1120, 1140, 1150, 1210 ^{1,2}		BIOL 2340 - Introduction to Genetics		BIOL 3130 - Introduction to Biochemistry	
BIOL 1110 - Principles of Biology 1		BIOL 2160 - Introductory Microbiology		BIOL 3230 - Biochemistry	
BIOL 1210 - Principles of Biology 2		BIOL 2170 - Introduction to Ecology		BIOL 3350 - Molecular Genetics	
CHEM 1500 - Chemical Bonding/Organic Chem.		BIOL 2280 - Evolution & Ecology of Land Plants		BIOL 3520 - Cell Physiology	
CHEM 1510 or 1520		BIOL 2290 - Evolution of Animal Body Plans		BIOL 3210 - Microbial Ecology	
MATH 1140 (or 1150) - Calculus 1		CHEM 2120 - Organic Chemistry 1		BIOL 3400 - Reading and Writing Great Biology	
MATH 1240 (or 1250) - Calculus 2		CHEM 2220 - Organic Chemistry 2		BIOL 4110 - Advanced Microbiology Lab	
PHYS 1100 or 1150 ³		ELECTIVES (21 credits)		BIOL 4210 - Microbial Physiology	
PHYS 1200 or 1250 ³		Non-science elective ⁴		BIOL 4130 - Molecular Evolution	
COMP 3 credits ¹		Non-science elective ⁴		BIOL 4250 - Biochemical Techniques 2	
Notes: 1. Must be taken prior to third year. 2. Students with a B or better in ENGL 1100 or 1110 need only take 3 credits of ENGL. The remaining 3 credits may be taken in any discipline outside science. CMNS 2300 is recommended. (*English 1150 may not be suitable for professional programs. Please consult your Advisor.) 3. Students with a grade of 80% or better in Physics 12 only need to complete PHYS 1150 (3 credits). The remaining 3 credits may be taken in any subject area. 4. Non-Science electives must be in at least two different subject areas (other than English).		Non-science elective ⁴		BIOL 4350 - Regulation of Gene Expression	
		Elective in lieu of 2 nd ENGL ²		CMMB Electives - Choose 2 from (6 credits):	
		Other elective		BIOL 3010, BIOL 3200, BIOL 3310, BIOL 3510, BIOL 3540, BIOL 3550, BIOL 3800, BIOL 4150, BIOL 4480, BIOL 4490, BIOL 4600	
		3000/4000 elective		CMMB elective	
		3000/4000 elective		CMMB elective	
		3000/4000 elective		Honours Courses	
		CMMB Honours Program: Requires completion of 126 credits: 117 credits as above (minus 3 credits of upper-level electives) plus BIOL 3980 and BIOL 4980 (3 credits) and BIOL 4990 (Honours Thesis; 6 credits).		BIOL 3980 – Intro to Research	
				BIOL 4980 – Honours Seminar	
				BIOL 4990 – honours Thesis	

KEEP IN MIND

Course Load: Transitioning to university can be challenging and many students choose to take a lighter course load. Please speak with Academic Advising to discuss sequencing and workload.
Resources: See the current [Academic Calendar](#) for more about the program requirements. Find more in the [Course Schedule](#) about course prerequisites, co-requisites and course times.

1st and 2nd Year Science COURSE SEQUENCE

FALL SEMESTER ONLY	WINTER SEMESTER ONLY
BIOL 1110	BIOL 1210
BIOL 2160	BIOL 2130
BIOL 2170	BIOL 2340
BIOL 2280	BIOL 2290
CHEM 1500	CHEM 1510 or 1520
CHEM 2120	CHEM 2220
MATH 1140	MATH 1140
MATH 1150	MATH 1250
MATH 1240	MATH 1240
PHYS 1100 or 1150	PHYS 1200 or 1250

INSTITUTIONAL LEARNING OUTCOMES

To graduate from a TRU Bachelor degree, students may be required to satisfy 8 Institutional Learning Outcomes (ILO) plus a Capstone course. (27 credits).

To find out if these requirements apply to you, please refer to DegreeWorks (available through [myTRU](#)) or contact your Program Advisor for more information.

If you are required to satisfy the ILO's, you must have courses that meet the following requirements:

- 1 course for each of the eight Institutional learning outcomes
- Of those 8 courses, a minimum of 4 (1 in each theme) must be outside the discipline.
- Of those 8 courses, one must also be designated as high impact.
- You must also complete the Capstone course in the final 30 credits of your study.

	Institutional Learning Outcome	Course	Inside or Outside?	High Impact?
Connection	Communication			
	Teamwork			
Engagement	Lifelong Learning			
	Social Responsibility			
Exploration	Knowledge			
	Critical Thinking			
Local-to-Global	Indigenous Knowledges & Ways			
	Intercultural Awareness			
	Capstone			

How do I search for an ILO course?

Visit the [course schedule](#) and select a term. On the following screen, click the Attribute box and select an ILO.