NAME/ID#: _____

THOMPSON RIVERS UNIVERSITY
Academic Advising
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GUIDELINES FOR BACHELOR OF SCIENCE DATA SCIENCE 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
MATH 1140	MATH 1240
CHEM 1500	MATH 1700 (or 1220)
COMP 1130	COMP 1230
COMP 1110	BIOL 1110 **or** GEOL 1110 (see important notes)
YEAR 2	
FALL SEMESTER	WINTER SEMESTER
MATH 2110	MATH 2120
COMP 2920	STAT 2000
PHYS 1100 or 1150	COMP 2230
COMP 2160 or 2680	CMNS 2300 **or** 2290
Non-Science Elective	Non-Science Elective

IMPORTANT NOTE

- 3 credits must be taken from the following: BIOL 1110 **or** BIOL 1210 **or** GEOL 1110 **or** GEOL 2050

COURSE OFFERINGS – 1000/2000 level	
FALL SEMESTER ONLY	WINTER SEMESTER ONLY
CHEM 1500 PHYS 1150 BIOL 1210 MATH 2110	BIOL 1110 CMNS 2300

Name/T-ID: _____

Bachelor Of Science DATA SCIENCE MAJOR Checksheet (120 credits)

1000-Level CORE courses (30-33 credits)

COURSE		GRADE
ENGL 1100 or 1110 [1]		
ENGL 1100 ,1110, 1120, 1140 or 1210 [1]		
COMP 1110 – Intro to Computer Programming		
COMP 1130 - Computer Programming 1		
COMP 1230 – Computer Programming 2		
MATH 1140 – Calculus 1		
MATH 1240 – Calculus 2		
MATH 1700 or 1220		
CHEM 1500 – Chemical Bonding & Organic Chem		
PHYS 1100 or 1150		
1 of BIOL 1110 or 1210 or GEOL 1110 or 2050		

Notes:

1. Students with a B or better in ENGL 1100 or 1110 may proceed directly into CMNS 2290 or 2300 in their second year, without completing an additional 3 credits in ENGL. These students will be required to take 12 credits of non-science electives rather than 9 credits.
2. Electives must include 9-12 credits in at least two disciplines outside of science (other than English). The remaining elective credits may be chosen from any discipline.

2000-Level CORE courses (21 credits)

COURSE		GRADE
COMP 2230 – Data Structures, Algorithm Analysis		
COMP 2920 - Software Architecture and Design		
COMP 2160 or 2680		
MATH 2110 – Calculus 3		
MATH 2120 - Linear Algebra 1		
STAT 2000 - Introduction to Statistics		
CMNS 2290 or 2300 [1]		

Electives 1000-4000 level (21-24 credits)

Non-science elective [2,]		
Non-science elective [2,]		
Non-science elective [2,]		
Elective in lieu of 2nd ENGL [1,2,]		
General elective (1000-4000 level)		
General elective (1000-4000 level)		
General elective (1000-4000 level)		
3000/4000-level elective		

General Electives:

- Electives must include 9-12 credits in at least two disciplines outside of science in courses other than science or English.
- The remaining elective credits may be chosen from any discipline.
- At least 3 credits must be in courses numbered 3000 or higher.
- At least 9 credits must be upper-level MATH/COMP/STAT.

Institutional Learning Outcomes (ILOs) may be required to graduate.
Refer to the Degree Works website for more information.

3000/4000-Level CORE courses (45 credits)

3000/4000 Level COMP requirements (21 credits)

COURSE	GRADE
COMP 3050 - Algorithm Design and Analysis	
COMP 3450 – Human-Computer Interaction Design	
COMP 3520 – Software Engineering	
COMP 3610 - Database Systems	
COMP 3710 - Applied Artificial Intelligence	
COMP 4910 – Computing Science Project	
COMP 4930 – Professional & Ethical Issues	

3000/4000 Level MATH requirements (6 credits)

MATH 3020 - Introduction to Probability	
MATH 3030 - Introduction to Stochastic Processes	

3000/4000 Level STAT requirements (9 credits)

STAT 3050 - Introduction to Statistical Inference	
STAT 3060 – Applied Regression Analysis	
STAT 4040 - Analysis of Variance	

3000/4000 Level MATH/COMP/STAT Electives (9 credits)

3000/4000 MATH/COMP/STAT [3]		
3000/4000 MATH/COMP/STAT [3]		
3000/4000 MATH/COMP/STAT [3]		

*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.

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, workload, future career and educational goals and more.

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 (SOCI)	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