

Fleming College

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ARTICULATION AGREEMENT

BETWEEN

**FLEMING COLLEGE'S EARTH RESOURCES TECHNICIAN CO-OP DIPLOMA
&
TRENT UNIVERSITY'S ENVIRONMENTAL GEOSCIENCE DEGREE**

MARCH, 2017

Fleming College

Earth Resources Technician Co-op Diploma

to

Trent University's

Bachelor of Science, Honours degree in Environmental Geoscience

This agreement establishes the principles, guidelines and procedures governing admission and assessment of selected qualified students to enter the Bachelor of Science, Honours degree in Environmental Geoscience at Trent University on an advanced standing basis, subsequent to the successful completion of Fleming College's Earth Resources Technician Co-op five-semester diploma.

1. PURPOSE

- 1.1. The purpose of this agreement is to provide qualified graduates of Fleming College's five semester Earth Resources Technician Co-op Diploma with a seamless option for continuing their education at Trent University in the Bachelor of Science, Honours degree in Environmental Geoscience.

2. ROLES AND RESPONSIBILITIES

2.1. Program Collaboration

- Program faculty and their departments will be responsible for coordinating collaborative meetings to engage in ongoing discussions to enhance and coordinate their programs.
- Trent's program faculty will support incoming students by providing them with relevant information related to their program.

2.2. Student Supports

Trent's program faculty will provide additional supports as required and agreed upon in the signed memorandum between the institutions.

2.3. Admissions

The Admissions Office at Trent University will be responsible for ensuring that eligible students will be awarded credit transfers as stated in said agreement.

2.4. Recruitment and Marketing

Recruitment and Marketing representatives at both institutions will be responsible for promoting the articulation pathway, recruiting students and providing the necessary orientation as students move from one institution to the other.

2.5. Students

Through communication with program faculty and orientation sessions, students will be advised to consult academic advisors to ensure they are successfully completing program requirements.

3. TERMS AND CONDITIONS OF THE AGREEMENT

- 3.1. Graduates of the four semester Earth Resources Technician Co-op Diploma from Fleming College will be granted 9.0 credits towards a Bachelor of Science, Honours degree in Environmental Geoscience at Trent University.

- 3.2. Upon successful admission to Trent University, students are required to take an additional 11.0 credits to meet degree requirements.

The 11.0 credit requirement can be completed in 2 academic years (normal course load is 5.0 credits/year) if the extra 1.0 credits (MATH 1005 or MATH 1110H AND CHEM 1010H) are taken in the summer either prior to beginning study at Trent or between years 1 and 2 (note: course selection during the academic year will vary based on when these courses are completed). It is advisable that the student take MATH 1005H or 1110H in the summer before beginning their studies at Trent as it is a prerequisite for the required math course(s) to be completed in year 1 at Trent. Should a student not wish to take these courses in the summer term then it will take longer than 2 academic years to complete all required courses. (note: there is no guarantee that these courses will always be offered during the summer term at Trent University).

- 3.3. Implementation of this articulation agreement is pending Ministry approval of the Environmental Geoscience degree at Trent University.

4. ADMISSION REQUIREMENTS

- 4.1. To qualify for this agreement, students must have:
- successfully completed Fleming College's Earth Resources Technician Co-op Diploma
 - a minimum overall average of 75%
- 4.2. Students must meet all specific admission and enrollment standards and requirements for the program and will be accepted subject to capacity if applicable.

5. TRANSFER OF CREDITS

- 5.1. Students graduating from the Earth Resources Technician Diploma five semester program with a minimum average of 75% will be granted 9.0 credits towards the successful completion of a 20 credit Bachelor of Science degree in Environmental Geoscience at Trent University. Credits will be transferred as follows:

Courses completed at Fleming College	Course equivalencies at Trent University	Credits receive
SCIE 62, Introductory Chemistry (45 hours)	CHEM 1000H Introductory Chemistry I	0.5
ECOS 13, Ecosystem Skills (60 hours)	BIOL 1020H Foundations of Biodiversity	0.5
ENVR 20, Ecology and Environment (60 hours)	ERSC 1010H Foundations of Environmental Science and Studies	0.5
GEOG 36, Geospatial Techniques (45 hours) NATR 91, Soil Mechanics (45 hours)	GEOG 1040H Earth's Physical Processes and Environments	0.5
MATH 25, Statistics (45 hours)	GEOG-BIOL-ERSC 2080H Natural Science Statistics	0.5
SURV 22, Surveying for ERT (30 hours) GEOG 17, Geo-Environmental Site Investigations (45 hours)	EGEO-GEOG-ERSC 2100H Field Methods in Environmental Geoscience	0.5
GEOG 35, Stability of Earth and Structures (45 hours) GEOG 48, Rock Engineering (45 hours)	EGEO 3200H Structural Geology	0.5
GEOG 42, Introduction to Mineralogy and Petrology (60 hours)	EGEO 3100H Introduction to Mineralogy and Petrology	0.5
GEOG 64, Introduction to Sampling Protocols (18 hours) COMP 461, Data Management for Environmental and Natural Resources Management (45 hours)	ERSC 2240H Ecological Assessment for Natural Resource Management	0.5
GEOG 21, Principles of Hydrogeology (60 hours)	GEOG 4080H Hydrogeology	0.5
GEOG 12, Geophysical Methods (60 hours)	EGEO 3300H Applied and Environmental Geophysics	0.5
GEOG 39, Surficial Geology (45 hours)	GEOG 3510H Glacial and Quaternary Geomorphology	0.5
GEOG 34, Sampling Protocols (60 hours) SCIE 65, Geochemical Environmental Analysis (45 hours)	ERSC 2230H Environmental Assessment: Sampling and Analysis	0.5
COMM 34, Technical Reporting (45 hours)	ERSC 3502H Environment and Communication: Writing and Reporting	0.5
COMM 201, Communications I (45 hours)	WRIT 1001H Write in Time	0.5
APST 89: Co-op preparation; APST 100 ERT Co-op Placement	EGEO 4100H Placement/Outreach Experience	0.5
Completion of all program requirements including GNED courses	1.0 ARTS UNASSIGNED 2000 LEVEL	1.0

5.2. As these credits recognize areas covered in Fleming College's Earth Resources Technician Diploma rather than one-to-one course equivalents, numerical grades will not be recorded on the Trent transcript. Completion of these credits will be recognized with a pass grade.

6. PROGRAM AND GRADUATION REQUIREMENTS

6.1. Upon admission to the Bachelor of Science degree in Environmental Geoscience at Trent, students must satisfy all general education, graduation and major requirements as outlined in the

university's undergraduate calendar. If a student does not have the prerequisite course required for entry into an upper level course, the student will be required to enroll in the prerequisite course(s).

6.2. If a student transfers to a different degree program, all transfer credits outlined in this agreement may not apply to the new degree program. It is the student's responsibility to consult an academic advisor and to notify the Registrar's Office of any program changes.

6.3. To satisfy the requirements of Trent's Bachelor of Science degree in Environmental Geoscience, students will need to complete the following courses in addition to the credits already granted:

Program Requirements	Courses Granted through transfer equivalency	Courses students still need to take
YEAR 1: BIOL 1020H, CHEM 1000H, 1010H, COIS 1020H or 1520H, ERSC 1010H, GEOG 1040H, MATH 1005H or MATH 1110H, MATH 1550H, 1120H or MATH-COIS 2180H, PHYS 1001H, 1002H	BIOL 1020H, CHEM 1000H, ERSC 1010H, GEOG 1040H	CHEM 1010H, COIS 1520H or 1020H, MATH 1005H or MATH 1110H, MATH 1550H, 1120H or MATH-COIS 2180H, PHYS 1001H, 1002H
YEAR 2: GEOG-BIOL-ERSC 2080H, EGEO-GEOG-ERSC 2100H, CHEM-ERSC 2620H, ERSC 2230H, 2240H, GEOG-ERSC 2090H, GEOG-ERSC 2401H, GEOG 2460H, GEOG 2540H 0.5 ELECTIVE CREDIT	GEOG-BIOL-ERSC 2080H, EGEO-GEOG-ERSC 2100H, ERSC 2230H, ERSC 2240H, 0.5 ARTS YR 2 TO FILL ELECTIVE CREDIT	CHEM-ERSC 2620H, GEOG-ERSC 2090H, GEOG 2460H, GEOG-ERSC 2401H, GEOG 2540H
YEAR 3: GEOG-ERSC 3020H, GEOG 3530H OR GEOG 4080H, GEOG 3540H, GEOG-ERSC-SAFS 3560H, EGEO 3100H, EGEO 3XXXH, EGEO 3XXXH 1.5 ELECTIVE CREDITS	GEOG 4080H, EGEO 3100H, EGEO 3XXXH, EGEO 3XXXH 0.5 ARTS YR 2, WRIT 1001H AND ERSC 3502H TO FILL ELECTIVES	GEOG-ERSC 3020H, GEOG 3540H, GEOG-ERSC-SAFS 3560H
YEAR 4: GEOG 3410H, GEOG 3510H OR GEOG 3520H, GEOG 3590H, ERSC-GEOG-BIOL 4060H OR CHEM-ERSC 3600H, EGEO 4XXXH 2.5 ELECTIVE CREDITS	GEOG 3510H, EGEO 4xxxH	GEOG 3410H, GEOG 3590H, ERSC-GEOG-BIOL 4060H OR CHEM-ERSC 3600H, 2.5 ELECTIVE CREDITS (maximum 1.5 at 1000 level and minimum 0.5 at 3000 level or above)
General University Degree Requirements		
13.0 science credits (including 1.0 in Mathematics)	7.0 Science credits awarded	Required science credits will be filled with above degree requirements. 1.0 MATH AS NOTED ABOVE
A minimum of 7 credits at the 3000 or 4000 level	3.5 credits at 3000 or 4000 level	Minimum 3.5 credits at 3000 level or above required. Minimum 3.0 will be met through requirements above depending on course selection
A minimum of 3 credits with a grade of 60% in a different discipline	Covered through transfer credits	---
Maximum of 7 credits at the 1000 level	2.5 1000 LEVEL CREDITS	Maximum of 1.5 additional 1000 level credits beyond 3.0 1000 level credits required for degree

6.4. Completion of required courses will vary on an individual basis based on the flexibility and course options within the Bachelor of Science degree and specific program chosen. Students must fulfill the following Trent University degree requirements:

- i. A maximum of 7.0 credits at the 1000 level
- ii. 7.0 credits completed at the 3000 or 4000 level through both program requirements and general elective options
- iii. An overall minimum average of 65% in Trent University courses to obtain an honours degree

Note: It is recommended that students transferring into the Bachelor of Science degree meet with an Academic Advisor at Trent University prior to completing any course selections.

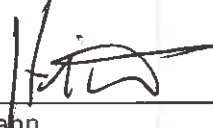
7. IMPLEMENTATION AND REVIEW

This agreement is subject to review whenever either party makes curricular changes that impact the agreement. When a change occurs, the program departments will notify their respective articulation designates so that the agreement can be updated. Articulation designates at each institution will review the agreement annually to ensure it is current. This Agreement may be terminated by either party. In this case, notice of one year is required. In the event of termination of the Agreement, every effort will be made to ensure that students currently enrolled in the program will not be affected.

8. ACCEPTANCE OF AGREEMENT

We, the undersigned, as the representatives of Trent University and Fleming College, hereby demonstrate our commitment to full implementation of the Agreement.

For, and on behalf of,
of, Trent University



Dr. Holger Hintelmann
Dean of Arts and Science –Sciences

13.03.17

Date

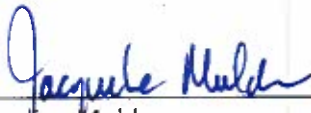
For, and on behalf
of, Fleming College



Dr. Linda Skilton
Dean/Principal, School of Environmental & Resource
Sciences, Frost Campus

March 21, 2017

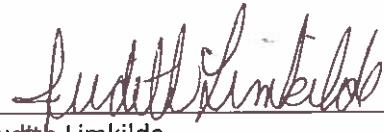
Date



Dr. Jacqueline Muldoon
Provost and Vice-President Academic

March 13, 2017

Date



Judith Limkilde
Vice-President Academic

March 21, 2017

Date

MAY 2017
ADDENDUM
 TO
ARTICULATION AGREEMENT
 BETWEEN
FLEMING COLLEGE'S
EARTH RESOURCES TECHNICIAN CO-OP DIPLOMA
 AND
TRENT UNIVERSITY'S
ENVIRONMENTAL GEOSCIENCE DEGREE

This Addendum recognizes the changes outlined below and shall become effective as of the date of signing and remain effective until the above mentioned Agreement expires or until a new agreement is entered into, whichever occurs first.

The following changes have occurred in Trent University courses, resulting in course equivalency name changes. These changes specifically refer to Section 5 and 6 of the Agreement.

BACHELOR OF SCIENCE (HONOURS) ENVIRONMENTAL GEOSCIENCE: TRANSFER CREDITS

Students graduating from the Earth Resources Technician Co-op five-semester Diploma program with a minimum overall average of 75%, who are eligible, will be granted 9.0 credits towards the successful completion of a 20 credit Bachelor of Science (Honours) Degree in Environmental Geoscience.

Courses completed at Fleming College	Course equivalencies at Trent University	Credits receive
SCIE 62, Introductory Chemistry (45 hours)	CHEM 1000H Introductory Chemistry I	0.5
ECOS 13, Ecosystem Skills (60 hours)	BIOL 1020H Foundations of Biodiversity	0.5
ENVR 20, Ecology and Environment (60 hours)	ERSC 1010H Foundations of Environmental Science and Studies	0.5
GEOG 36, Geospatial Techniques (45 hours) NATR 91, Soil Mechanics (45 hours)	GEOG 1040H Earth's Physical Processes and Environments	0.5
MATH 25, Statistics (45 hours)	GEOG-BIOL-ERSC 2080H Natural Science Statistics	0.5
SURV 22, Surveying for ERT (30 hours) GEOL 17, Geo-Environmental Site Investigations (45 hours)	EGEO-GEOG-ERSC 2000H Field Methods in Environmental Geoscience	0.5
GEOL 35, Stability of Earth and Structures (45 hours) GEOL 48, Rock Engineering (45 hours)	EGEO 3002H Structural Geology	0.5
GEOL 42, Introduction to Mineralogy and Petrology (60 hours)	EGEO 3000H Introduction to Mineralogy and Petrology	0.5

GEOL 64, Introduction to Sampling Protocols (18 hours) COMP 461, Data Management for Environmental and Natural Resources Management (45 hours)	ERSC 2240H Ecological Assessment for Natural Resource Management	0.5
GEOL 21, Principles of Hydrogeology (60 hours)	GEOG 4080H Hydrogeology	0.5
GEOL 12, Geophysical Methods (60 hours)	EGEO 3001H Applied and Environmental Geophysics	0.5
GEOL 39, Surficial Geology (45 hours)	GEOG 3510H Glacial and Quaternary Geomorphology	0.5
GEOL 34, Sampling Protocols (60 hours) SCIE 65, Geochemical Environmental Analysis (45 hours)	ERSC 2230H Environmental Assessment: Sampling and Analysis	0.5
COMM 34, Technical Reporting (45 hours)	ERSC 3502H Environment and Communication: Writing and Reporting	0.5
COMM 201, Communications I (45 hours)	WRIT 1001H Write in Time	0.5
APST 89: Co-op preparation; APST 100 ERT Co-op Placement	EGEO 4000H ENV. Geoscience Placement	0.5
Completion of all program requirements including GNED courses	1.0 ARTS UNASSIGNED 2000 LEVEL	1.0

Program Requirements	Courses Granted through Transfer Equivalency	Courses students still need to take
YEAR 1: BIOL 1020H, CHEM 1000H, 1010H, COIS 1020H or 1520H, ERSC 1010H, GEOG 1040H, MATH 1005H or MATH 1110H, MATH 1550H, 1120H or MATH-COIS 2180H, PHYS 1001H, 1002H	BIOL 1020H, CHEM 1000H, ERSC 1010H, GEOG 1040H	CHEM 1010H, COIS 1520H or 1020H, MATH 1005H or MATH 1110H, MATH 1550H or MATH 1120H, PHYS 1001H, 1002H
YEAR 2: GEOG-BIOL-ERSC 2080H, EGEO-GEOG-ERSC 2100H, CHEM-ERSC 2620H, ERSC 2230H, 2240H, GEOG-ERSC 2090H, GEOG-ERSC 2401H, GEOG 2460H, GEOG 2540H 0.5 ELECTIVE CREDIT	GEOG-BIOL-ERSC 2080H, EGEO-GEOG-ERSC 2000H, ERSC 2230H, ERSC 2240H, 0.5 ARTS YR 2 TO FILL ELECTIVE CREDIT	CHEM-ERSC 2620H, GEOG-ERSC 2090H, GEOG 2460H, GEOG-ERSC 2401H, GEOG 2540H
YEAR 3: GEOG-ERSC 3020H, GEOG 3530H OR GEOG 4080H, GEOG 3540H, GEOG-ERSC-SAFS 3560H, EGEO 3000H, EGEO 3001H, EGEO 3002H 1.5 ELECTIVE CREDITS	GEOG 4080H, EGEO 3000H, EGEO 3001H, EGEO 3002H 0.5 ARTS YR 2, WRIT 1001H AND ERSC 3502H TO FILL ELECTIVES	GEOG-ERSC 3020H, GEOG 3540H, GEOG-ERSC-SAFS 3560H
YEAR 4: GEOG 3410H, GEOG 3510H OR GEOG 3520H, GEOG 3590H, ERSC-GEOG-BIOL 4060H OR CHEM-ERSC 3600H, EGEO 4000H 2.5 ELECTIVE CREDITS	GEOG 3510H, EGEO 4000H	GEOG 3410H, GEOG 3590H, ERSC-GEOG-BIOL 4060H OR CHEM-ERSC 3600H, 2.5 ELECTIVE CREDITS (maximum 1.5 at 1000 level and minimum 0.5 at 3000 level or above)

General University Degree Requirements		
13.0 science credits (including 1.0 in Mathematics)	7.0 Science credits awarded	Required science credits will be filled with above degree requirements. 1.0 MATH AS NOTED ABOVE
A minimum of 7 credits at the 3000 or 4000 level	3.5 credits at 3000 or 4000 level	Minimum 3.5 credits at 3000 level or above required. Minimum 3.0 will be met through requirements above depending on course selection
A minimum of 3 credits with a grade of 60% in a different discipline	Covered through transfer credits	---
Maximum of 7 credits at the 1000 level	2.5 1000 LEVEL CREDITS	Maximum of 1.5 additional 1000 level credits beyond 3.0 1000 level credits required for degree

We, the undersigned, as the representatives of Trent University and Fleming College, hereby demonstrate our commitment to full implementation of the Addendum to the Agreement.

For, and on behalf of,
Trent University

Dr. Holger Hintelmann
Dean of Arts and Science, Sciences

For, and on behalf of,
Fleming College

Brett Goodwin
Dean School of Environment & Resource
Sciences

JUNE 2018
ADDENDUM
 TO THE
ARTICULATION AGREEMENT #4906
 BETWEEN
FLEMING COLLEGE'S
EARTH RESOURCES TECHNICIAN CO-OP DIPLOMA
 AND
TRENT UNIVERSITY'S
BACHELOR OF SCIENCE (HONOURS), ENVIRONMENTAL GEOSCIENCE

This Addendum recognizes the changes outlined below and shall become effective as of the September 2018 intake and remain effective until a new agreement is entered into.

Trent University has implemented the following degree requirement changes. These changes specifically refer to Section 6 of the Agreement.

BACHELOR OF SCIENCE (HONOURS), ENVIRONMENTAL GEOSCIENCE: PROGRAM REQUIREMENTS

Program Requirements	Courses Granted Through Transfer Equivalency	Courses Students Still Need to Take
2.5 EGEO credits consisting of EGEO 2001H (or 3000H), 3001H, 3002H, 3003H (or 2000H), and 4000H* <i>*may be substituted by EGEO 4020D</i>	EGEO 2000H, 3000H, 3001H, 3002H and 4000H	---
0.5 BIOL credit consisting of BIOL 1020H	BIOL 1020H	---
1.5 CHEM credits consisting of CHEM 1000H, 1010H and 2620H	CHEM 1000H	CHEM 1010H and 2620H
1.5 ERSC credits consisting of ERSC 1010H, 2230H, and 2240H	ERSC 1010H, 2230H and 2240H	---
5.5 GEOG credits consisting of GEOG 1040H, 2080H, 2090H, 2401H, 2460H, 2540H, 3020H, 3410H, 3540H, 3560H, and 3590H	GEOG 1040H and 2080H	GEOG 2090H, 2401H, 2460H, 2540H, 3020H, 3410H, 3540H, 3560H and 3590H
1.0 PHYS credit consisting of PHYS 1001H and 1002H	---	PHYS 1001H and 1002H
0.5 COIS credit from COIS 1020H or 1520H	---	COIS 1020H or 1520H
0.5 MATH credit from MATH 1005H or 1110H	---	MATH 1005H or 1110H

0.5 MATH credit from MATH 1120H or 1550H	---	MATH 1120H or 1550H
0.5 GEOG credit from GEOG 3510H or 3520H	GEOG 3510H	---
0.5 GEOG credit from GEOG 3530H or 4080H	GEOG 4080H	---
0.5 credit from CHEM-ERSC 3600H or ERSC-GEOG-BIOL 4060H	---	CHEM-ERSC 3600H or ERSC-GEOG-BIOL 4060H
4.5 additional credits	ERSC 3502H; WRIT 1001H; 1.0 Arts credit at the 2000 level	2.5 additional credits
General University Requirements		
A minimum of 14.0 science credits (including 1.0 MATH)	7.0 assigned through transfer credit	Fulfilled through program requirements
A minimum of 7.0 credits at the 3000 or 4000 level	3.5 assigned through transfer credit	3.0 required above; an additional 0.5 required
A minimum of 3.0 credits with a grade of 60% leading to majors in a different discipline	Fulfilled through transfer credit	---
Maximum of 7.0 credits at the 1000 level	2.5 assigned through transfer credit	3.0 required above; maximum 1.5 additional permitted
Minimum of 0.5 credit from the Approved Indigenous Course List	---	Minimum 0.5 credit from the Approved Indigenous Course List