

Fleming College



**ARTICULATION AGREEMENT
RENEWAL:**

**EARTH RESOURCES TECHNICIAN
TO
ENVIRONMENTAL GEOSCIENCE**

BETWEEN

**THE SIR SANDFORD FLEMING COLLEGE OF APPLIED
ARTS AND TECHNOLOGY
AND
TRENT UNIVERSITY**

APRIL, 2020

The Sir Sandford Fleming College of Applied Arts and Technology's

Earth Resources Technician Co-op Diploma

to

Trent University's

Bachelor of Science (Honours), Environmental Geoscience

This agreement re-establishes the principles, guidelines and procedures governing admission and assessment of selected qualified students to enter Trent University on an advanced standing basis, subsequent to the successful completion of the Earth Resources Technician Co-op Diploma at The Sir Sandford Fleming College of Applied Arts and Technology (Fleming College).

This agreement replaces all previous versions of the Agreement – ONCAT #4906.

1. PURPOSE

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

2. ROLES AND RESPONSIBILITIES

2.1. Student Supports

Trent's program faculty will support incoming students by providing them with relevant information related to their program.

2.2. 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.

2.3. Recruitment and Marketing

Recruitment and Marketing representatives at Trent University will be responsible for promoting the articulation pathway and recruiting students.

2.4. 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 Fleming College's Earth Resources Technician Co-op Diploma program will be granted 9.0 credits towards a 20.0 credit Bachelor of Science (Honours) in Environmental Geoscience at Trent University.
- 3.2 Upon successful admission to Trent University, students are required to complete an additional 11.0 credits to meet degree requirements. The 11.0 credit requirement can be completed within two academic years (standard course load is 5.0 credits per year) if 1.0 credit is taken in the summer term prior to beginning Trent and/or the summer between Year 1 and Year 2. Students who do not complete courses in the summer will be required to extend their studies at Trent beyond two

academic years. Consultation with an academic advisor is strongly recommended for assistance with degree planning and course availability. Please note that course offerings will vary from year to year.

3.3 Students that have graduated from Fleming College’s Earth Resources Technician Co-op Diploma program, who commenced studies since September 2018, will be awarded the full 9.0 transfer credits outlined in Article 5 so long as they meet admission requirements under Article 4 of this agreement. Students who commenced studies prior to September 2018 will receive the transfer credits outlined in the original Agreement.

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 who are eligible, graduating from Fleming College’s Earth Resources Technician Co-op Diploma program with a minimum average of 75%, will be granted 9.0 credits towards the successful completion of a 20.0 credit Bachelor of Science (Honours) in Environmental Geoscience at Trent University. Credits will be transferred as follows:

Students who commenced studies at Fleming College in September 2018 will receive the following credits:

Courses completed at Fleming College	Course equivalencies at Trent University	Credits received
ECOS 13 – Ecosystem Skills (60 credits)	BIOL 1020H – Foundations of Biodiversity	0.5
SCIE 62 – Introductory Chemistry (45 hours)	CHEM 1000H – Introductory Chemistry I	0.5
GEOL 42 – Introduction to Mineralogy and Petrology (60 hours)	EGEO-GEOG 2001H – Earth Materials	0.5
GEOL 12 – Geophysical Methods (60 hours)	EGEO-GEOG 3001H – Applied and Environmental Geophysics	0.5
GEOL 35 – Stability of Earth and Structures (45 hours) GEOL 48 – Rock Engineering (45 hours)	EGEO-GEOG 3002H – Structural Geology	0.5
SURV 22 – Surveying for ERT (30 hours) GEOL 17 – Geo-Environmental Site Investigations (45 hours)	EGEO-ERSC-GEOG 3003H – Field Methods in Environmental Geoscience	0.5
APST 89 – Co-op Preparation/APST 100 – ERT Co-op Placement (645 hours)	EGEO 4000H – Environmental Geoscience Placement/Outreach Experience	0.5
ENVR 20 – Ecology and Environment (60 hours)	ERSC 1010H – Environmental Science and Sustainability	0.5
GEOL 34 – Sampling Protocols (60 hours) SCIE 65 – Geochemical Environmental Analysis (45 hours)	ERSC 2230H – Environmental Assessment: Sampling and Analysis	0.5
GEOL 64 – Introduction to Sampling Protocols (60 hours) GEOM 122 – Geospatial Data Techniques (90 hours) NATR 91 – Soil Mechanics (45 hours)	ERSC 2240H – Ecological Assessment for Natural Resource Management GEOG 1040H – Earth’s Physical Processes and Environments	1.0

MATH 25 – Statistics (45 hours)	GEOG-BIOL-ERSC 2080H – Natural Science Statistics	0.5
GEOL 39 – Surficial Geology (45 hours)	GEOG 3510H – Glacial and Quaternary Geomorphology	0.5
GEOL 21 – Principles of Hydrogeology (60 hours)	GEOG 4080H – Hydrogeology	0.5
COMM 201 – Communications I (45 hours)	WRIT 1001H – Write in Time	0.5
COMM 202 – Communications II (45 hours)	WRIT 2002H – Write It Up: Effective Communication	0.5
Completion of all program requirements, including GNED courses	1.0 unassigned Arts credit at the 2000 level	1.0

Students who commenced studies at Fleming College in September 2019 or later will receive the following credits:

Courses completed at Fleming College	Course equivalencies at Trent University	Credits received
ECOS 13 – Ecosystem Skills (60 credits)	BIOL 1020H – Foundations of Biodiversity	0.5
SCIE 62 – Introductory Chemistry (45 hours)	CHEM 1000H – Introductory Chemistry I	0.5
GEOL 42 – Introduction to Mineralogy and Petrology (60 hours)	EGEO-GEOG 2001H – Earth Materials	0.5
GEOL 12 – Geophysical Methods (60 hours)	EGEO-GEOG 3001H – Applied and Environmental Geophysics	0.5
GEOL 35 – Stability of Earth and Structures (45 hours) GEOL 48 – Rock Engineering (45 hours)	EGEO-GEOG 3002H – Structural Geology	0.5
SURV 22 – Surveying for ERT (30 hours) GEOL 17 – Geo-Environmental Site Investigations (45 hours)	EGEO-ERSC-GEOG 3003H – Field Methods in Environmental Geoscience	0.5
APST 89 – Co-op Preparation/APST 100 – ERT Co-op Placement (645 hours)	EGEO 4000H – Environmental Geoscience Placement/Outreach Experience	0.5
ENVR 20 – Ecology and Environment (60 hours)	ERSC 1010H – Environmental Science and Sustainability	0.5
GEOL 34 – Sampling Protocols (60 hours) SCIE 65 – Geochemical Environmental Analysis (45 hours)	ERSC 2230H – Environmental Assessment: Sampling and Analysis	0.5
GEOL 64 – Introduction to Sampling Protocols (60 hours) GEOM 122 – Geospatial Data Techniques (90 hours) NATR 91 – Soil Mechanics (45 hours)	ERSC 2240H – Ecological Assessment for Natural Resource Management GEOG 1040H – Earth's Physical Processes and Environments	1.0
MATH 25 – Statistics (45 hours)	GEOG-BIOL-ERSC 2080H – Natural Science Statistics	0.5
GEOL 39 – Surficial Geology (45 hours)	GEOG 3510H – Glacial and Quaternary Geomorphology	0.5
GEOL 21 – Principles of Hydrogeology (60 hours)	GEOG 4080H – Hydrogeology	0.5
GNED 49 – Introduction to Indigenous Studies (45 hours)	INDG 1001H – The Foundations for Reconciliation	0.5
COMM 201 – Communications I (45 hours)	WRIT 1001H – Write in Time	0.5
COMM 202 – Communications II (45 hours)	WRIT 2002H – Write It Up: Effective Communication	0.5
Completion of all program requirements, including GNED courses	0.5 unassigned Arts credit at the 2000 level	0.5

5.2. As these credits recognize areas covered in Fleming College's Earth Resources Technician Co-op Diploma program rather than the completion of Trent University courses, 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 (Honours) 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 foundation or skills to enroll in an upper level course because of a lack of the appropriate introductory course(s), any necessary prerequisite course(s) will be required.
- 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 (Honours) in Environmental Geoscience, students will need to complete specific courses to meet program requirements in addition to the courses they have already been granted from Fleming College. Program requirements are subject to change annually and the Academic Calendar should be consulted for all degree requirements and regulations. www.trentu.ca/calendar.

For students beginning studies at Fleming College in September 2018:

Program Requirements	Courses Granted through transfer equivalency	Courses students still need to take
2.0 EGEO credits consisting of EGEO 2001H (or 3000H), 3001H, 3002H, and 3003H (or 2000H)	EGEO 2001H, 3001H, 3002H and 3003H	---
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	---
4.0 GEOG credits consisting of GEOG 1040H, 2080H, 2090H, 2460H, 2540H, 3020H, 3560H, and 3590H	GEOG 1040H and 2080H	GEOG 2090H, 2460H, 2540H, 3020H, 3560H and 3590H
0.5 PHYS credit consisting of PHYS 1001H	---	PHYS 1001H
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 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*
1.0 credit from Category A (Foundation Science): BIOL 1030H; COIS 1020H; COIS 1400H; CHEM 2400H; MATH 1110H*; MATH 1120H*; MATH 1550H*; PHYS 1002H	---	1.0 credit from Category A

2.5 credits from Category B (Other Geoscience): CHEM-ERSC 3600H*; EGEO 4000H; EGEO 4020D; ERSC 3450H; ERSC-GEOG-BIOL 4060H*; ERSC-BIOL-GEOG 4070H; ERSC 4350H; ERSC 4530H; GEOG 2401H, GEOG-ERSC 3010H; GEOG 3410H; GEOG 3440H; GEOG 3510H; GEOG 3520H; GEOG 3530H*; GEOG 3540H; GEOG-ERSC-SAFS 3650H; GEOG 4080H*; GEOG 4090H; GEOG-ERSC 4450H; GEOG-ERSC 4640H	EGEO 4000H; GEOG 3510H	1.5 credit from Category B
4.5 additional credits	WRIT 1001H and 2002H; 1.0 unassigned ARTS 2000 level	2.5 additional credits
General University Requirements		
14.0 science credits, including 1.0 MATH	7.0 Science assigned through transfer credit	Fulfilled through program requirements, including 1.0 MATH
A minimum of 7.0 credits at the 3000 or 4000 level	3.0 assigned through transfer credit	3.5 fulfilled through program requirements; 0.5 additional required
A minimum of 3.0 credits with a grade of 60% leading to majors in different disciplines	Fulfilled through transfer credit	---
Maximum of 7.0 credits at the 1000 level	2.5 assigned through transfer credit	Minimum 2.5 required through program requirements; Maximum 2.0 additional permitted
Minimum of 0.5 credit from the Approved Indigenous Course List	---	Minimum 0.5 credit from the Approved Indigenous Course List

**Important notes: Asterisked courses may only be counted once toward program requirements. Students are encouraged to carefully plan when selecting courses to ensure they acquire prerequisites, particularly for ERSC 2240H, CHEM-ERSC 3600H, and GEOG 4080H. Furthermore, students are strongly encouraged to take additional courses listed in category B beyond the program requirements to extend their Geoscience background.*

For students beginning studies at Fleming College in September 2019 or later:

Program Requirements	Courses Granted through transfer equivalency	Courses students still need to take
2.0 EGEO credits consisting of EGEO 2001H (or 3000H), 3001H, 3002H, and 3003H (or 2000H)	EGEO 2001H, 3001H, 3002H and 3003H	---
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	---
4.0 GEOG credits consisting of GEOG 1040H, 2080H, 2090H, 2460H, 2540H, 3020H, 3560H, and 3590H	GEOG 1040H and 2080H	GEOG 2090H, 2460H, 2540H, 3020H, 3560H, and 3590H
0.5 PHYS credit consisting of PHYS 1001H	---	PHYS 1001H

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 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*
1.0 credit from Category A (Foundation Science): BIOL 1030H; COIS 1020H; COIS 1400H; CHEM 2400H; MATH 1110H*; MATH 1120H*; MATH 1550H*; PHYS 1002H		1.0 credit from Category A
2.5 credits from Category B (Other Geoscience): CHEM-ERSC 3600H*; EGEO 4000H; EGEO 4020D; ERSC 3450H; ERSC-GEOG-BIOL 4060H*; ERSC-BIOL-GEOG 4070H; ERSC 4350H; ERSC 4530H; GEOG 2401H, GEOG-ERSC 3010H; GEOG 3410H; GEOG 3440H; GEOG 3510H; GEOG 3520H; GEOG 3530H*; GEOG 3540H; GEOG-ERSC-SAFS 3650H; GEOG 4080H*; GEOG 4090H; GEOG-ERSC 4450H; GEOG-ERSC 4640H	EGEO 4000H; GEOG 3510H	1.5 credits from Category B
4.5 additional credits	INDG 1001H; WRIT 1001H and 2002H; 0.5 unassigned ARTS 2000 level	2.5 additional credits
General University Requirements		
14.0 science credits, including 1.0 MATH	7.0 Science assigned through transfer credit	Fulfilled through program requirements, including 1.0 MATH
A minimum of 7.0 credits at the 3000 or 4000 level	3.0 assigned through transfer credit	3.5 fulfilled through program requirements; Minimum 0.5 additional required
A minimum of 3.0 credits with a grade of 60% leading to majors in different disciplines	Fulfilled through transfer credit	---
Maximum of 7.0 credits at the 1000 level	3.0 assigned through transfer credit	Minimum 2.5 fulfilled through program requirements; Maximum 1.5 additional permitted
Minimum of 0.5 credit from the Approved Indigenous Course List	INDG 1001H	---

**Important notes: Asterisked courses may only be counted once toward program requirements. Students are encouraged to carefully plan when selecting courses to ensure they acquire prerequisites, particularly for ERSC 2240H, CHEM-ERSC 3600H, and GEOG 4080H. Furthermore, students are strongly encouraged to take additional courses listed in category B beyond the program requirements to extend their Geoscience background.*

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

- i. A maximum of 7.0 credits at the 1000 level can count towards the degree;
- ii. A maximum of 1.0 credit with a D grade (50-59%) in courses in a major or each joint-major or minor;
- iii. At least 0.5 credit from the Approved Indigenous Course List;

- iv. 7.0 credits completed at the 3000 or 4000 level through both program requirements and general elective options;
- v. An overall minimum average of 65% in Trent University courses to obtain an honours degree;
- vi. A minimum of 14.0 science credits (including 0.5 Math credit);
- vii. The maximum credits in a discipline that can count towards the degree is 13.0.

Note: It is recommended that students transferring into the Bachelor of Science (Honours) in Environmental Geoscience 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 The Sir Sandford Fleming College of Applied Arts and Technology hereby demonstrate our commitment to full implementation of the Agreement.

For, and on behalf of,
Trent University

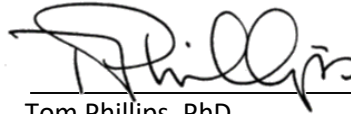


Dr. Holger Hintelmann
Dean of Arts and Science - Science

April 9, 2020

Date

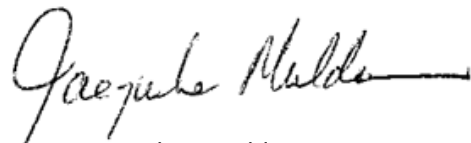
For, and on behalf of,
The Sir Sandford Fleming College of Applied Arts and
Technology



Tom Phillips, PhD
Vice President, Academic Experience

May 11, 2020

Date



Dr. Jacqueline Muldoon
Provost & Vice-President Academic
Trent University

April 8, 2020

Date

February 2022
ADDENDUM
 TO THE
ARTICULATION AGREEMENT #4906
 BETWEEN
**THE SIR SANDFORD FLEMING COLLEGE OF APPLIED ARTS AND TECHNOLOGY'S ONTARIO
 COLLEGE DIPLOMA EARTH RESORUCES TECHNICIAN**
 AND
TRENT UNIVERSITY'S
BACHELOR OF SCIENCE (HONOURS) ENVIRONMENTAL GEOSCIENCE

This Addendum recognizes the changes outlined below, which shall become effective as of the Fall 2022 intake at Trent University. These changes will remain effective until the above-mentioned Agreement expires or until a new agreement is entered in to, whichever occurs first.

The following changes have occurred:

- The following courses receiving transfer credit equivalents have been removed from the Earth Resource Technician Diploma program:
 - GEOM 122 – Geospatial Data Techniques
- The following courses have been added to the Earth Resource Technician Diploma program:
 - GEOL 83 - Earth and Atmosphere
 - GEOM 163 – Fundamental of Geomatics
 - GNED 3 – Anthropology
 - SSFC 19 – General Education Elective
- The transfer credit block and degree requirement char have been updated to reflect the new curriculum.

These changes specifically refer to Sections 5 and 6 of the Agreement.

BACHELOR OF SCIENCE (HONOURS), ENVIRONMENTAL GEOSCIENCE: TRANSFER CREDITS

Students graduating from the Fleming College's Earth Resources Technician Co-op Diploma program with a minimum overall average of 75% who are eligible, will be granted 9.0 credits toward the successful completion of a 20.0 credit Bachelor of Science (Honours) in Environmental Geoscience

Courses completed at [College]	Course equivalencies at Trent University	Credits received
ECOS 13 – Ecosystem Skills (60 credits)	BIOL 1020H – Foundations of Biodiversity	0.5
SCIE 62 – Introductory Chemistry (45 hours)	CHEM 1000H – Introductory Chemistry I	0.5
GEOL 42 – Introduction to Mineralogy and Petrology (60 hours)	EGEO-GEOG 2001H – Earth Materials	0.5
GEOL 12 – Geophysical Methods (60 hours)	EGEO-GEOG 3001H – Applied and Environmental Geophysics	0.5
GEOL 35 – Stability of Earth and Structures (45 hours) GEOL 48 – Rock Engineering (45 hours)	EGEO-GEOG 3002H – Structural Geology	0.5

SURV 22 – Surveying for ERT (30 hours) GEOL 17 – Geo-Environmental Site Investigations (45 hours)	EGEO-ERSC-GEOG 3003H – Field Methods in Environmental Geoscience	0.5
APST 89 – Co-op Preparation/APST 100 – ERT Co-op Placement (645 hours)	EGEO 4000H – Environmental Geoscience Placement/Outreach Experience	0.5
ENVR 20 – Ecology and Environment (60 hours)	ERSC 1010H – Environmental Science and Sustainability	0.5
GEOL 34 – Sampling Protocols (60 hours) SCIE 65 – Geochemical Environmental Analysis (45 hours)	ERSC 2230H – Environmental Assessment: Sampling and Analysis	0.5
GEOL 64 – Introduction to Sampling Protocols (60 hours) GEOL 83 – Earth and Atmosphere (45 hours) GEOG 163 – Fundamental of Geomatics (45 hours) NATR 91 – Soil Mechanics (45 hours)	ERSC 2090H – Introduction to Geographical Information Systems GEOG 1040H – Earth’s Physical Processes and Environments	1.0
MATH 25 – Statistics (45 hours)	GEOG-BIOL-ERSC 2080H – Natural Science Statistics	0.5
GEOL 39 – Surficial Geology (45 hours)	GEOG 3510H – Glacial and Quaternary Geomorphology	0.5
GEOL 21 – Principles of Hydrogeology (60 hours)	GEOG 4080H – Hydrogeology	0.5
GNER 49 – Introduction to Indigenous Studies (45 hours)	INDG 1001H – The Foundations for Reconciliation	0.5
COMM 201 – Communications I (45 hours)	WRIT 1001H – Write in Time	0.5
COMM 202 – Communications II (45 hours)	WRIT 2002H – Write It Up: Effective Communication	0.5
Completion of all program requirements, including GNER courses	0.5 unassigned Arts credit at the 2000 level	0.5

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

Program Requirements	Courses Granted Through Transfer Equivalency	Courses Students Still Need to Take
2.0 EGEO credits consisting of EGEO 2001H (or 3000H), 3001H, 3002H, and 3003H (or 2000H)	EGEO 2001H, 3001H, 3002H and 3003H	---
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
2.0 ERSC credits consisting of ERSC 1010H, 2230H, 2240H, and 4060H	ERSC 1010H and 2230H,	ERSC 4060H and ERSC 2240H
4.0 GEOG credits consisting of GEOG 1040H, 2080H, 2090H, 2460H, 2540H, 3020H, 3560H, and 3590H	GEOG 1040H, 2080H and 2090H	GEOG 2460H, 2540H, 3020H, 3560H and 3590H
0.5 GEOG credit from GEOG 3530H* or 4080H*	GEOG 4080H	---
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 PHYS credit from PHYS 1000H or 1001H	---	PHYS 1000H or 1001H
1.0 credit from Category A (Foundation Science): BIOL 1030H, CHEM 2400H, COIS 1020H, COIS 1400H, COIS 1520H, MATH 1110H*, MATH 1120H*, MATH 1550H*, and PHYS 1002H	---	1.0 credit from Category A
2.5 credits from Category B (Other Geoscience): EGEO 4000H, EGEO 4020D, ERSC 3450H, ERSC-BIOL-GEOG 4070H, ERSC 4350H, ERSC 4530H, GEOG 2401H, GEOG-ERSC 3010H, GEOG 3410H, GEOG 3440H, GEOG 3510H, GEOG 3520H, GEOG 3530H*, GEOG 3540H, GEOG-ERSC-SAFS 3650H, GEOG 4080H*, GEOG 4090H, GEOG-ERSC 4450H, GEOG-ERSC 4640H	EGEO 4000H; GEOG 3510H	1.5 credits from Category B
4.5 additional credits	INDG 1001H; WRIT 1001H and 2002H; 0.5 unassigned ARTS 2000 level	2.5 additional credits
General University Requirements		
A minimum of 14.0 science credits, including 1.0 MATH credit	7.0 assigned through transfer credit	Fulfilled through program requirements
A minimum of 7.0 credits at the 3000 or 4000 level	3.0 assigned through transfer credit	3.5 fulfilled through program requirements; Minimum 0.5 additional 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	3.0 assigned through transfer credit	Minimum 2.5 fulfilled through program requirements; Maximum 1.5 additional permitted
Minimum of 0.5 credit from the Approved Indigenous Course List	INDG 1001H	---

**Important notes: Asterisked courses may only be counted once toward program requirements. Students are encouraged to carefully plan when selecting courses to ensure they acquire prerequisites, particularly for ERSC 2240H, CHEM-ERSC 3600H, and GEOG 4080H. Furthermore, students are strongly encouraged to take additional courses listed in category B beyond the program requirements to extend their Geoscience background.*

APRIL 2022
ADDENDUM
 TO THE
ARTICULATION AGREEMENT #4906
 BETWEEN
**THE SIR SANDFORD FLEMING COLLEGE OF APPLIED ARTS AND TECHNOLOGY'S ONTARIO
 COLLEGE DIPLOMA EARTH RESORUCES TECHNICIAN**
 AND
TRENT UNIVERSITY'S
BACHELOR OF SCIENCE (HONOURS) ENVIRONMENTAL GEOSCIENCE

This Addendum recognizes the changes outlined below, which shall become effective as of the Spring 2023 intake at Trent University. These changes will remain effective until the above-mentioned Agreement expires or until a new agreement is entered into, whichever occurs first.

The following change will occur in Fleming College's Earth Resources Technician Diploma starting in Fall 2022:

- GNE49 – Introduction to Indigenous Studies (45 hours) will be replaced with INDG 49 – Introduction to Indigenous Studies (45 Hours)

These changes specifically refer to Section 5 of the Agreement.

BACHELOR OF SCIENCE (HONOURS), ENVIRONMENTAL GEOSCIENCE: TRANSFER CREDITS

Students graduating from the Fleming College's Earth Resources Technician Co-op Diploma program with a minimum overall average of 75% who are eligible, will be granted 9.0 credits toward the successful completion of a 20.0 credit Bachelor of Science (Honours) in Environmental Geoscience

Courses completed at [College]	Course equivalencies at Trent University	Credits received
ECOS 13 – Ecosystem Skills (60 credits)	BIOL 1020H – Foundations of Biodiversity	0.5
SCIE 62 – Introductory Chemistry (45 hours)	CHEM 1000H – Introductory Chemistry I	0.5
GEOL 42 – Introduction to Mineralogy and Petrology (60 hours)	EGEO-GEOG 2001H – Earth Materials	0.5
GEOL 12 – Geophysical Methods (60 hours)	EGEO-GEOG 3001H – Applied and Environmental Geophysics	0.5
GEOL 35 – Stability of Earth and Structures (45 hours) GEOL 48 – Rock Engineering (45 hours)	EGEO-GEOG 3002H – Structural Geology	0.5
SURV 22 – Surveying for ERT (30 hours) GEOL 17 – Geo-Environmental Site Investigations (45 hours)	EGEO-ERSC-GEOG 3003H – Field Methods in Environmental Geoscience	0.5
APST 89 – Co-op Preparation/APST 100 – ERT Co-op Placement (645 hours)	EGEO 4000H – Environmental Geoscience Placement/Outreach Experience	0.5

ENVR 20 – Ecology and Environment (60 hours)	ERSC 1010H – Environmental Science and Sustainability	0.5
GEOL 34 – Sampling Protocols (60 hours) SCIE 65 – Geochemical Environmental Analysis (45 hours)	ERSC 2230H – Environmental Assessment: Sampling and Analysis	0.5
GEOL 64 – Introduction to Sampling Protocols (60 hours) GEOL 83 – Earth and Atmosphere (45 hours) GEOM 163 – Fundamental of Geomatics (45 hours) NATR 91 – Soil Mechanics (45 hours)	ERSC 2090H – Introduction to Geographical Information Systems GEOG 1040H – Earth’s Physical Processes and Environments	1.0
MATH 25 – Statistics (45 hours)	GEOG-BIOL-ERSC 2080H – Natural Science Statistics	0.5
GEOL 39 – Surficial Geology (45 hours)	GEOG 3510H – Glacial and Quaternary Geomorphology	0.5
GEOL 21 – Principles of Hydrogeology (60 hours)	GEOG 4080H – Hydrogeology	0.5
INDG 49 – Introduction to Indigenous Studies (45 Hours)	INDG 1001H – The Foundations for Reconciliation	0.5
COMM 201 – Communications I (45 hours)	WRIT 1001H – Write in Time	0.5
COMM 202 – Communications II (45 hours)	WRIT 2002H – Write It Up: Effective Communication	0.5
Completion of all program requirements, including GNED courses	0.5 unassigned Arts credit at the 2000 level	0.5

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

Program Requirements	Courses Granted Through Transfer Equivalency	Courses Students Still Need to Take
2.0 EGEO credits consisting of EGEO 2001H (or 3000H), 3001H, 3002H, and 3003H (or 2000H)	EGEO 2001H, 3001H, 3002H and 3003H	---
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
2.0 ERSC credits consisting of ERSC 1010H, 2230H, 2240H, and 4060H	ERSC 1010H and 2230H,	ERSC 4060H and ERSC 2240H
4.0 GEOG credits consisting of GEOG 1040H, 2080H, 2090H, 2460H, 2540H, 3020H, 3560H, and 3590H	GEOG 1040H, 2080H and 2090H	GEOG 2460H, 2540H, 3020H, 3560H and 3590H
0.5 GEOG credit from GEOG 3530H* or 4080H*	GEOG 4080H	---
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 PHYS credit from PHYS 1000H or 1001H	---	PHYS 1000H or 1001H
1.0 credit from Category A (Foundation Science): BIOL 1030H, CHEM 2400H, COIS 1020H, COIS 1400H, COIS 1520H, MATH 1110H*, MATH 1120H*, MATH 1550H*, and PHYS 1002H	---	1.0 credit from Category A

SEPTEMBER 2022
ADDENDUM
TO THE
ARTICULATION AGREEMENT #4906
BETWEEN
**THE SIR SANDFORD FLEMING COLLEGE OF APPLIED ARTS AND TECHNOLOGY'S ONTARIO
COLLEGE DIPLOMA GEOLOGICAL TECHNICIAN (FORMALLY EARTH RESOURCES
TECHNICIAN)**
AND
TRENT UNIVERSITY'S
BACHELOR OF SCIENCE (HONOURS) ENVIRONMENTAL GEOSCIENCE

This Addendum recognizes the changes outlined below, which shall become effective as of Fall 2024 intake at Trent University. These changes will remain effective until the above-mentioned Agreement expires or until a new agreement is entered in to, whichever occurs first.

The following changes have occurred:

- Fleming College has changed the program name of the Ontario College Diploma in Earth Resources Technician to the Ontario College Diploma in Geological Technician

2.5 credits from Category B (Other Geoscience): EGEO 4000H, EGEO 4020D, ERSC 3450H, ERSC-BIOL-GEOG 4070H, ERSC 4350H, ERSC 4530H, GEOG 2401H, GEOG-ERSC 3010H, GEOG 3410H, GEOG 3440H, GEOG 3510H, GEOG 3520H, GEOG 3530H*, GEOG 3540H, GEOG-ERSC-SAFS 3650H, GEOG 4080H*, GEOG 4090H, GEOG-ERSC 4450H, GEOG-ERSC 4640H	EGEO 4000H; GEOG 3510H	1.5 credits from Category B
4.5 additional credits	INDG 1001H; WRIT 1001H and 2002H; 0.5 unassigned ARTS 2000 level	2.5 additional credits
General University Requirements		
A minimum of 14.0 science credits, including 1.0 MATH credit	7.0 assigned through transfer credit	Fulfilled through program requirements
A minimum of 7.0 credits at the 3000 or 4000 level	3.0 assigned through transfer credit	3.5 fulfilled through program requirements; Minimum 0.5 additional 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	3.0 assigned through transfer credit	Minimum 2.5 fulfilled through program requirements; Maximum 1.5 additional permitted
Minimum of 0.5 credit from the Approved Indigenous Course List	INDG 1001H	---

**Important notes: Asterisked courses may only be counted once toward program requirements. Students are encouraged to carefully plan when selecting courses to ensure they acquire prerequisites, particularly for ERSC 2240H, CHEM-ERSC 3600H, and GEOG 4080H. Furthermore, students are strongly encouraged to take additional courses listed in category B beyond the program requirements to extend their Geoscience background.*

FEBRUARY 2023
ADDENDUM
 TO THE
ARTICULATION AGREEMENT #4906
 BETWEEN
THE SIR SANDFORD FLEMING COLLEGE OF APPLIED ARTS AND TECHNOLOGY'S
ONTARIO COLLEGE DIPLOMA IN GEOLOGICAL TECHNICIAN
 AND
TRENT UNIVERSITY'S
BACHELOR OF SCIENCE (HONOURS), ENVIRONMENTAL GEOSCIENCE

This Addendum recognizes the changes outlined below, which shall become effective as of the Fall 2023 intake at Trent University. These changes will remain effective until the above-mentioned Agreement expires or until a new agreement is entered in to, whichever occurs first.

The following changes have occurred:

- Changes to requirements in the Environmental Geoscience program.

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
2.0 EGEO credits consisting of EGEO 2001H, 3001H, 3002H, and 3003H	EGEO 2001H, 3001H, 3002H, and 3003H	---
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
2.0 ERSC credits consisting of ERSC 1010H, 2230H, 2240H, and 4060H	ERSC 1010H and 2230H	ERSC 2240H and 4060H
4.0 GEOG credits consisting of GEOG 1040H, 2080H, 2090H, 2460H, 2540H, 3530H, 3560H, and 3590H	GEOG 1040H, 2080H, and 2090H	GEOG 2460H, 2540H, 3530H, 3560H, and 3590H
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 PHYS credit from PHYS 1000H or 1001H	---	PHYS 1000H or 1001H
1.0 credit from category A in addition to the above	---	1.0 credit from Category A in addition to the above
3.0 credits from category B in addition to the above	EGEO 4000H; GEOG 3510H and 4080H	1.5 credits from Category B in addition to the above
4.5 additional credits	INDG 1001H; WRIT 1001H and 2002H; 0.5 unassigned ARTS 2000 level	2.5 additional credits
General University Requirements		
A minimum of 14.0 science credits, including 1.0 MATH credit	7.0 assigned through transfer credit	Fulfilled through program requirements

A minimum of 7.0 credits at the 3000 or 4000 level	3.0 assigned through transfer credit	3.5 fulfilled through program requirements; Minimum 0.5 additional 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	3.0 assigned through transfer credit	Minimum 2.5 required above; Maximum 1.5 additional permitted
Minimum of 0.5 credit from the Approved Indigenous Course List	INDG 1001H	---

**Important notes: Asterisked courses may only be counted once toward program requirements. Students are encouraged to carefully plan when selecting courses to ensure they acquire prerequisites, particularly for ERSC 2240H, CHEM-ERSC 3600H, and GEOG 4080H. Furthermore, students are strongly encouraged to take additional courses listed in category B beyond the program requirements to extend their Geoscience background.*

JUNE 2023
ADDENDUM
TO THE
ARTICULATION AGREEMENT #4906
BETWEEN
THE SIR SANDFORD FLEMING COLLEGE OF APPLIED ARTS AND TECHNOLOGY'S
ONTARIO COLLEGE DIPLOMA IN GEOLOGICAL TECHNICIAN
AND
TRENT UNIVERSITY'S
BACHELOR OF SCIENCE (HONOURS), ENVIRONMENTAL GEOSCIENCE

This Addendum recognizes the changes outlined below, which shall become effective as of the Fall 2023 intake at Fleming College. These changes will remain effective until the above-mentioned Agreement expires or until a new agreement is entered in to, whichever occurs first.

The following changes have occurred:

- Fleming College has suspended the Geological Technician Diploma. Graduates of the program will still be eligible for the block of transfer credits as per the terms outlined in the original agreement, as well as subsequent addendums.



July 7, 2023

Trent University Durham GTA
55 Thornton Road South
Oshawa ON L1J 5Y1

Attention: Tawny Flude, Team Lead, Coordinator, Articulation and Transfer Pathways

**Re: Suspension of the Ontario College Diploma in Geological Technician
(Earth Resources Technician) (ONCAT #4906)**

Dear Ms. Flude,

I wish to inform you of recent program changes. Fleming is committed to promoting excellence in the development, design, delivery, and ongoing review of its academic programs. Upon examination of various factors, such as enrollment demographics and the financial sustainability of program delivery, several evidence-based decisions have been made and supported by the Board of Governors.

Fleming hereby notifies you that the **Ontario College Diploma in Geological Technician** is suspended effective September 2023. The final cohort was admitted into the program in September 2022, and their natural graduation date is June 2024.

As per the Implementation and Review sections of the Fleming to Trent and Trent to Fleming Agreements:

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.

We thank you for your supporting the Geological Technician program. If you have any questions, please do not hesitate to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Molly Westland".

Molly Westland, RN BScN MN
Associate Vice President, Academic Operations

JANUARY 2024
ADDENDUM
 TO THE
ARTICULATION AGREEMENT #4906
 BETWEEN
THE SIR SANDFORD FLEMING COLLEGE OF APPLIED ARTS AND TECHNOLOGY'S
ONTARIO COLLEGE DIPLOMA IN GEOLOGICAL TECHNICIAN
 AND
TRENT UNIVERSITY'S
BACHELOR OF SCIENCE (HONOURS), ENVIRONMENTAL GEOSCIENCE

This Addendum recognizes the changes outlined below, which shall become effective as of the Fall 2023 intake at Fleming College. These changes will remain effective until the above-mentioned Agreement expires or until a new agreement is entered in to, whichever occurs first.

The following changes have occurred:

- Updated transfer credit block to reflect the following changes to the Geological Technician Diploma;
 - SCIE 62 – Introductory Chemistry (45 hours) has been replaced with SCIE 189 – Introduction to Environmental Chemical Science (60 hours);
 - GEOL 21 – Principles of Hydrogeology (60 hours) has been replaced with GEOL 162 – Groundwater Management (60 hours).

The transfer credits received remain unchanged.

These changes specifically refer to Section 5 of the Agreement.

BACHELOR OF SCIENCE (HONOURS), ENVIRONMENTAL GEOSCIENCE: TRANSFER CREDITS

Students graduating from Fleming College's Geological Technician Diploma program with a minimum overall average of 75%, who are eligible, will be granted 9.0 credits toward the successful completion of a 20.0 credit Bachelor of Science (Honours) in Environmental Geoscience.

Courses Completed at Fleming College	Course Equivalencies at Trent University	# of Credits Received
GEOL 42 – Introduction to Mineralogy and Petrology (60 hours)	EGEO-GEOG 2001H – Earth Materials	0.5
GEOL 12 – Geophysical Methods (60 hours)	EGEO-GEOG 3001H – Applied and Environmental Geophysics	0.5
GEOL 35 – Stability of Earth and Structures (45 hours); GEOL 48 – Rock Engineering (45 hours)	EGEO-GEOG 3002H – Structural Geology	0.5
GEOL 17 – Geo-Environmental Site Investigations (45 hours); SURV 22 – Surveying for ERT (30 hours)	EGEO-ERSC-GEOG 3003H – Field Methods in Environmental Geoscience	0.5
APST 89 – Co-op Preparation/APST 100 – ERT Co-op Placement (645 hours)	EGEO 4000H – Environmental Geoscience Placement/Outreach Experience	0.5
ECOS 13 – Ecosystem Skills (60 hours)	BIOL 1020H – Foundations of Biodiversity	0.5

SCIE 189 – Introduction to Environmental Chemical Science (60 hours)	CHEM 1000H – Introductory Chemistry I	0.5
ENVR 20 – Ecology and Environment (60 hours)	ERSC 1010H – Environmental Science and Sustainability	0.5
GEO 34 – Sampling Protocols (60 hours); SCIE 65 – Geochemical Environmental Analysis (45 hours)	ERSC 2230H – Environmental Assessment: Sampling and Analysis	0.5
GEO 64 – Introduction to Sampling Protocols (60 hours); GEO 83 – Earth and Atmosphere (45 hours); GEO 163 – Fundamentals of Geomatics (45 hours); NATR 91 – Soil Mechanics (45 hours)	ERSC 2090H – Introduction to Geographical Information Systems; GEO 1040H – Earth’s Physical Processes and Environments	1.0
MATH 25 – Statistics (45 hours)	GEOG-BIOL-ERSC 2080H – Natural Science Statistics	0.5
GEO 39 – Surficial Geology (45 hours)	GEOG 3510H – Glacial and Quaternary Geomorphology	0.5
GEO 162 – Groundwater Management (60 hours)	GEOG 4080H – Hydrogeology	0.5
INDG 49 – Introduction to Indigenous Studies (45 hours)	INDG 1001H – The Foundation for Reconciliation	0.5
COMM 201 – Communications I (45 hours)	WRIT 1001H – Write in Time	0.5
COMM 202 – Communications II (45 hours)	WRIT 2002H – Write It Up: Effective Communication	0.5
Completion of all program components, including GNED requirements	0.5 unassigned Arts credit at the 2000 level	0.5

OCTOBER 2024
ADDENDUM
TO THE
ARTICULATION AGREEMENT #4906
BETWEEN
THE SIR SANDFORD FLEMING COLLEGE OF APPLIED ARTS AND TECHNOLOGY'S
ONTARIO COLLEGE DIPLOMA IN GEOLOGICAL TECHNICIAN
AND
TRENT UNIVERSITY'S
BACHELOR OF SCIENCE (HONOURS), ENVIRONMENTAL GEOSCIENCE

This Addendum recognizes the changes outlined below, which shall become effective immediately at Trent University. These changes will remain effective until the above-mentioned Agreement expires or until a new agreement is entered into, whichever occurs first.

The following changes have occurred:

- Clarifying transfer credit eligibility for students who have completed the Indigenous Perspectives Designation.

Changes refer to Section 5 of the Agreement. The following will be added as Article 5.3:

- Students who have completed the Indigenous Perspectives Designation (IPD) and who meet the terms of this articulation agreement are eligible to receive an additional transfer credit.
- Students will receive credit for INDG 1002H – Foundations of Modern Indigenous Life for completing INDG 128 – Introduction to Indigenous Knowledges.
- Completion of INDG 49 – Introduction to Indigenous Studies is already recognized as part of the original transfer credit block, providing INDG 1001H - The Foundation for Reconciliation as transfer credit.