



LAKEHEAD UNIVERSITY

FACULTY OF SCIENCE AND ENVIRONMENTAL STUDIES

GEOLOGY

CHANGE REQUEST REPORT

Change Request Tracking Number: 2022-SCI-7986

Title of Change Request: Program_Special Modification_UG Honours Bachelor of Earth Science (Earth Science Major) – Transfer – Fleming College (New)_GEOLOGY

Status of Change Request: In Workflow

Change Request can't be split

CHANGE REQUEST CONTENTS

#	Type	Title
1.	New Program	Honours Bachelor of Earth Science (Earth Science Major) – Transfer – Fleming College

CHANGE REQUEST HISTORY

Workflow Stage	Action Type	Action Taken By	Change Made	Action Rationale	Date
Initiator	Approved	Kristine Carey	No	Submitted to workflow	06/29/2022, 10:04 AM
Submission Review (Deputy Provost)	Approved	Deputy Provost	No	In correct workflow.	09/20/2022, 09:36 AM
Advisory Panel Review	Approved	Deputy Provost	No	In correct workflow.	09/20/2022, 09:37 AM
Dean and Faculty Council Review Stage	Relegated	SES Admin	No	Relegating back as per request from Jodie.	09/21/2022, 12:40 PM
Advisory Panel Review	Approved	Administrative Assistant to Provost & VP (Academic)	No	The Advisory Review Panel met on September 29, 2022 and had no suggestions or concerns.	10/04/2022, 10:07 AM
Dean and Faculty Council Review Stage	Approved	SES Admin	No	Approved at FSES Faculty Council Meeting Oct. 11, 2022.	10/12/2022, 03:34 PM
Additional Dean-Social Sciences and Humanities	Relegated	Susan Viitala	No	Reviewing the courses – I would strongly suggest not using INDI 1314	10/31/2022, 11:19 AM

				as we will most likely be deleting it in our next round of curriculum changes. I would suggest INDI 1316 would be more appropriate. It is a special topics in Indigenous History but many of those core concepts will be covered.
Initiator	Approved	Kristine Carey	No	Recommended modification has been made in both the calendar entry and the revised program brief (v3)
Dean and Faculty Council Review Stage	Approved	SES Admin	No	Previously approved at FSES Faculty Council Meeting Oct. 11, 2022.
				11/02/2022, 09:02 AM
				11/11/2022, 09:54 AM

SUPPORTING DOCUMENTS

File Name	Uploaded By	Upload Date	Size
Fleming-HEBSc Earth Science articulation proposal brief_draft_v3.pdf	Kristine Carey	11/02/2022, 08:42 AM	324 KB

SUPPORTING DOCUMENTS AUDIT TRAIL

File Name	User	Date	Action
Fleming-HEBSc Earth Science articulation proposal brief_draft_v2 (2).pdf	Kristine Carey	06/28/2022, 04:48 PM	Uploaded
Fleming-HEBSc Earth Science articulation proposal brief_draft_v2 (2).pdf	Kristine Carey	11/02/2022, 08:42 AM	Deleted
Fleming-HEBSc Earth Science articulation proposal brief_draft_v2.pdf	Kristine Carey	06/28/2022, 01:24 PM	Uploaded
Fleming-HEBSc Earth Science articulation proposal brief_draft_v2.pdf	Kristine Carey	06/28/2022, 04:48 PM	Deleted
Fleming-HEBSc Earth Science articulation proposal brief_draft_v3.pdf	Kristine Carey	11/02/2022, 08:42 AM	Uploaded

CHANGE REQUEST COMMENTS

None.

1.	New Program	Honours Bachelor of Earth Science (Earth Science Major) – Transfer – Fleming College
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DEGREE DETAILS**SPECIAL MODIFICATION FORM**

NOTE TO USER about this form: For information on when to use this form contact the Academic & Curriculum Development Coordinator

The following is information that will be displayed in the University Calendar:

Title of Program: Honours Bachelor of Earth Science (Earth Science Major) – Transfer – Fleming College

Program Requirements:

Graduates of the 2-year diploma in Geology Technician (Co-Op) from Fleming College, with a minimum average of 70%, may be considered for admission into the Honours Bachelor of Environmental Science (Earth Science Major) program. Qualified applicants are eligible for second year standing in the Honours Bachelor of Environmental Science (Earth Science Major) program and will receive a block transfer of 7 non-transferable FCEs toward the 20 FCEs required for the program. Meeting the minimum requirements does not guarantee admission to either the University or a specific program. An overall average of at least 70% in all required courses, but not including the open electives must be maintained. Should the 70% average not be attained, the student may apply for the BESc (Earth Science Major) – Fleming College Transfer.

First Year at Lakehead University:

- (a) Environmental Studies 1150 and 1190
- (b) Geology 2214, 2215, 2217, 2219
- (c) Chemistry 1110, 1130
- (d) One FCE chosen from: Mathematics 1210 and 1230 or 1151 and 1152 or 1171 and 1172

Notes:**1. Mathematics**

Students who do not have a 70% average in their transfer equivalent math courses must register for Mathematics 1051 and 1077. Mathematics 1210 and 1230 or 1151 and 1152 or 1171 and 1172 is taken in Year 2.

Second Year at Lakehead University:

- (a) Environmental Studies 2013
- (b) Biology 1050 and 1051
- (c) Geology 3310 and 3410
- (d) Geography 2351
- (e) Physics 1113 and 1133 or Physics 1211 and 1212

Third Year at Lakehead University:

- (a) Environmental Studies 3094, 4810
- (b) Geology 3311, 4181

- (c) One-half FCE from: Geology 3110, 3217, 3218, 4011, 4132, 4411
 (d) Mathematics 2310 and 2311

Note: The Indigenous Content Requirement is being met by the inclusion of INDI 1316 as a transfer equivalent course.

Four-year Non-Direct Entry program option

Bachelor of Environmental Science (Earth Science Major)
 4-year

This program option is for Honours students that are academically ineligible to continue in or complete the Honours program.

The program requirements for the first three years are the same as for the HBESc (Earth Science Major) program, except that in order to remain in the program, students must maintain at least an overall C average in the major.

Third Year at Lakehead University:

- (a) Environmental Studies 3094, 4810
 (b) Geology 3311
 (c) One-half FCE from: Geology 3110, 3217, 3218, 4011, 4132, 4411
 (d) Mathematics 2310 and 2311
 (e) One FCE elective from*: Civil Engineering 2012, 3738; Natural Resources Management 2110; Geography 2331, 2351, 3317, 3331, 4211, 4231, 4333; one FCE not previously taken from: Geology 3110, 3217, 3218, 4011, 4132, 4215, 4411
 *Permissions or prerequisite may be required

Note: The Indigenous Content Requirement is being met by the inclusion of INDI 1316 as a transfer equivalent course

The following is information for Committee Review:

Modified Program Code (Contact Academic & Curriculum Development Coordinator for New Code):	HBESC.EART.TRF
Calendar Start Term. When this change should be displayed in the Calendar:	2023-24
Calendar End Term. When is the last calendar year this should be displayed?:	No Specified End Date
Faculty or Institution Unit:	• Lakehead University
Academic Level:	Undergraduate
If this a graduate level program, select either PhD or Masters:	
Total number of credits for the degree:	20.00

Degree Type: HBESC

**Is the Quality Assurance
program proposal
attached?:** Yes

Transcript Title : HBSc GEOL Major

Pedagogical rationale for this proposal. Why are you submitting this request?: Establishment of an articulation agreement between Fleming College Geology Technician (Co-Op) diploma program and the HBSc Geology program is desired by both Fleming and the Department of Geology at Lakehead University. The Department of Geology seeks to establish this articulation to increase student numbers in our HBSc Geology program. Our historical high in enrollment, of 140 majors, was in 2011-12 and prior to that our largest enrollment, of just over 100 majors, was in 1982/83. The Department has struggled through some lean times with respect to undergraduate numbers (i.e., 2002-03 with only 18 majors). Between 2002 and 2012 our programs experienced a strong recovery in enrollment, which was experienced by all geoscience departments in Canada. Since 2011 the Department of Geology has experienced a progressive decline in the number of undergraduate majors, which is also being experienced nationally. Enrolment in our programs reflects the typical boom and bust cycles of the Canadian and global resource sectors (minerals and petroleum). Among Primary Undergraduate universities in Canada, the Department is fourth in terms of the number of students taught in services courses. However, the Department has the highest proportion of service enrollment to major enrollment, where 6% of our total course enrollment is majors versus an average of 18% for other Primary Undergraduate universities. In addition, we are in the top third of Canadian geoscience departments in terms of majors to faculty members (Fig. 1.5). Consequently, the Department has the capacity for increasing our number of majors and is seeking new avenues to recruit students. Student recruitment from Ontario secondary schools is challenging because of the absence of geoscience courses in the curriculum. However, recruitment from geoscience technician programs is a promising means of student recruitment that we have not previously tried for our Geology and Environmental Earth science programs (although we do have articulation agreements with multiple colleges for our Water Resource Science program). Further incentive stems from the recent surge of interest from graduates of the two-year Fleming College Geology Technician (Co-Op) diploma program. While diploma graduates have many post-graduate career opportunities, they are limited as to the level of advancement they can achieve in the geosciences. This is due to higher level careers in geosciences requiring individuals to be regulated and accredited by, in Ontario, Professional Geoscientists of Ontario (PGO). In contrast to engineering programs, geoscience programs in Ontario are not individually accredited by the PGO. Rather, programs are self-regulated by the academic unit to ensure that students meet the minimum knowledge requirement set forth by the PGO and Geoscientists Canada (<https://www.pgo.ca/registration/knowledge>). These knowledge requirements are only achieved through completion of a four-year university degree program in geoscience. Students graduating from our four-year honours or the four-year major (non-direct entry) programs in Geology or Environmental Earth Science programs meet or exceed the above knowledge requirements for the geology and environmental geoscience streams, respectively. Our programs

do not provide students with the knowledge requirements for the geophysics stream.

Associated Changes – List all other requests that are associate with this change (enter request number or title):

2022-SCI-7988 – Admission Requirement-New_Honours Bachelor of Environmental Science (Earth Science Major)-Transfer-Fleming College_UG_GEOLOGY

The following is information for Senate Budget Committee Consideration:

NOTE: Complete each section and provide full explanations for both "yes" and "no" answers. This will not be displayed in the calendar but will be used by the Senate Budget Committee when considering approval of this proposal. The creator of this proposal may be asked to attend a committee meeting to discuss this proposal. Contact the Chair of the Senate Budget Committee if you wish to discuss any of the questions below.

Will this program impact student enrolment in another program within the same faculty/unit?: No impact on any other specific program. Students will be required to take courses offered by the departments of Chemistry, Math and Physics. However, the number of students being added to these courses, which are already required for our programs, will be mimiumal (5-10 per year).

Will this program impact student enrolment in another program in a different faculty/unit?: No, as all courses take at LU will be within SES. Any program requirements for courses offered outside of SES are being granted transfer credit.

Will additional resources be required (space, staff, equipment, etc.)?: No, as Geology has ample lecture and lab space to handle an increase in our undergraduate student numbers, as the program is currently below our historical high enrolment

How will this impact existing teaching loads within this faculty/unit?: There will be no impact to existing teaching loads as the required courses are those that are already being offered for students in the HBSc (Geology Major) and HBESc (Earth Science programs)

What is the impact on the demand for teaching support services (library, computers, staff, etc.)?: There is no increase in demand for teaching support.

Will this require outside support? If yes, please outline the amount and timing of the funding: No outside support is required.