ENVIRONMENTAL STUDIES

The Bachelor of Environmental Studies is a multidisciplinary degree program offered by the Faculty of Arts. It is designed to prepare students for work related to environmental issues – from natural resource management and protection, to sustainable economic planning and development for the protection and preservation of the environment. The program includes geographical, cultural, sociopolitical, economic and ecological orientations to the environment. Studies in these fields provide a strong foundational understanding of natural processes and systems that make up the environment. Students can focus their environmental interests through exposure to a broad spectrum of knowledge about the human experience and the natural world, and practice in identifying, analyzing and mitigating environmental problems from a human perspective.

Please contact the Bachelor of Environmental Studies (https://www.smu.ca/bachelor-of-environmental-studies/) program for more information.

Programs

Bachelor of Environmental Studies

The program is a 4-year (120-credit-hour) B.E.S. It is comprised of:

Code	Title	Credit Hours
21 credit hours of required core foundation courses from the Faculties of Arts, Commerce and Science		21
24 credit hours of core courses beyond the required foundation courses		24
30 credit hours from thematic area choices		30
12 credit hours from specified elective courses of the following:		12
	introductory natural sciences	
	advanced-level natural sciences	
	enviromental sciences	
	social sciences	
	humanities	
33 credit hours of free electives		33
Total Credit Hours		**120**

At the 4000-level, the two required core *capstone* courses take an integrative and applied orientation to environmental policy and practice. To graduate, students must achieve a minimum requirement of a DGPA of at least 2.00.

Program Structure

In selecting their courses, B.E.S. Students are advised to follow the yearly program structure as much as possible. Students should also be aware of course prerequisites when choosing their courses. In the event that a stated prerequisite has not been earned, students must obtain instructor's permission in order to enroll.

BES students can minor in any subject, so long as they complete the requirements to satisfy the minor as stated in the specific Departments.

A Minor in Geography is available for B.E.S. Students. Students need to consult with the B.E.S Coordinator or a BA Advisor early in their program in order to take the required prerequisite courses for this minor.

A Minor in Global Environmental Politics is also available for B.E.S. students as outlined in the calendar. Students are free to take other Minor options in addition to their B.E.S. degree and are encouraged to consult the academic calendar and speak with the B.E.S. Coordinator or BA Advisor to discuss options.

Note: When choosing approved B.E.S. electives to meet the degree requirements, students are not permitted to take more than two 1000-level courses from any one subject area (ENVS, GEOG, POLI, etc.).

Cooperative Education Program (Co-op)

A B.E.S. degree with Cooperative Education (Co-op) is designed to provide interested and qualified students with an opportunity to integrate academic studies with active work experience in an approved job placement. The B.E.S. Co-op option is supplementary to the B.E.S. and Honours B.E.S. degree requirements, alternating periods of full time academic study with three months or more of practical experience in the working world. The Cooperative Education program will make every effort to provide students with up to three (3) paid work placements relevant to their undergraduate degree and/or future careers but cannot guarantee placements. Work terms start in September, January, or May, and have a minimum duration of 13 weeks, with at least 32.5 work hours per week.

1. Enrolment in the co-op option is limited and admission is evaluated on a competitive basis. The requirements listed below are the normal minimums. Satisfying these requirements does not guarantee admission.
2. Students are considered for admission after the completion of forty-five (45) credit hours. Normally, this will occur at the end of the first semester of the second year.
3. The normal admission requirement is a minimum cumulative grade point average of 2.70 (B-). For Honours students the admission requirement is a minimum grade point average of 3.00 (B).
4. Candidates will be admitted on the basis of their interest, aptitude, and assessed ability to successfully combine the academic requirements of a B.E.S. or a B.E.S. Honours program with the special work-term requirements of the Co-op option. The feasibility of the three proposed work-term placements will also be assessed.

Honours Program

The overarching Honours regulations for the Faculty of Arts will apply to students wishing to enter, continue and graduate with an Honours Bachelor of Environmental Studies degree. The Honours option requires B.E.S. students to achieve a higher standard of academic performance and to complete a thesis, encompassing research related to environmental studies.

1. In consultation with the B.E.S. Program Coordinator, students should formally declare their interest in taking an Honours degree after completing sixty (60) credit hours in the B.E.S. program.
2. The prerequisite for admission into Honours is a minimum cumulative grade point average of 3.00, with no grades below C (2.00).
3. To graduate with an Honours degree, students must achieve a minimum degree grade point average of 3.00.
4. In addition, Honours students must also complete BES Honours Thesis (BEST 4599) as part of their 120 credit hour degree program. This would normally be completed in the final year of the program

and would replace six (6) of the required credit hours in approved B.E.S. electives. Before students may register for BES Honours Thesis (BEST 4599) they must get the approval of a faculty member teaching within the B.E.S. degree program, who agrees to act as the student's thesis advisor.

First Year		**Credit Hours**
Twenty-four (24) credit hours in core social and life science courses:		24
ENVS 1200	Environmental Sustainability	
GEOG 1100	Global Perspectives on Land and Life (Group D)	
GEOG 1200	People, Place and Environment (Group D)	
ECON 1201	Principles of Economics: Micro	
SJCS 1211	Social Power Relations	
One of POLI 1201, POLI 1230, POLI 1250 or POLI 1260		
Select six credits in chosen electives [1]		
Six credits of the following Arts courses:		6
ANCS 1001	Ancient Civilizations of the Near East and Egypt (formerly CLAS 1001)	
ANCS 1002	The Ancient Civilizations of Greece and Rome (formerly CLAS 1002)	
ENGL 1205	Introduction to Literature	
ENGL 1220	Literature and Science	
ENGL 1230	Literature and the Environment	
HIST 1203	The Twentieth Century in Europe	
PHIL 1200	Critical Thinking	
	Credit Hours	**30**
Second Year		
Fifteen (15) credit hours in core environmental courses:		15
Select one of the following:		
GEOG 2313/ GEOL 2373	Geomorphology (Group B)	
GEOG 2315	The Oceans (Group D)	
GEOG 2343	Weather and Climate (Group B)	
Select one of the following:		
GEOG 2312	Urban Geography (Group A)	
GEOG 2341	Economic Geography (Group A)	
GEOG 2349	Cultural Geography (Group A)	
Select:		
ENVS 2200	Energy, Resources, and Pollution	
PHIL 2305	Environmental Ethics	
Select three credits in approved BES electives at the 2000-level or above		
Six credits of the following community development courses:		6
ANTH 1202	Introducing Socio-Cultural Anthropology	
GDST 2301	Global Development: History & Perspectives	
PSYC 1510	Introduction to Social Psychology (formerly PSYC 1250) (Group B)	
SOCI 1210	Introductory Sociology	
SJCS 2100	Community Organizing	
Three (3) credit hours in environmental thought chosen from:		3
ENGL 2318	The Writer and Nature	
ENGL 3518	Canadian Nature Writing	
HIST 2201	Environmental History of Europe, 1300 - 1900	
HIST 2202	Environmental History of North America	
RELS 2347	Ecology and Religion	
PHIL 2331	Business Ethics	
POLI 3245	Public Policy: Theories, Models & Typologies	3
GEOG 2333	Biogeography (Group B)	3
	Credit Hours	**30**
Third Year		
GEOG 3304	Environmental Management (Group D)	3
Three (3) credits in environmental sciences courses chosen from:		3
ENVS 3410	Environmental Impact Assessment (Select 3 credits of the following Enviromental Sciences Courses:)	
ENVS 3440	The Environment and Human Health	
ENVS 4431	Environmental Information Management (formerly ENVS 3430)	
ECON 3362 or ECON 3363	Natural Resource Economics or Environmental Economics	3
Three (3) credits in research methods courses from:		3
PSYC 2020	Psychological Statistics (formerly PSYC 2350) (Group C)	
GEOG 3326	Statistical Methods in Geography (Group C)	
GEOG 3416	Qualitative Research Methods in Geography (Group C)	
SOCI 3100	Qualitative Research Methods	
SOCI 3102	Quantitative Research Methods	
RELS 3351	Field Research Methods	
Six (6) credits in courses in environmental thought and communications chosen from:		6
GDST 4470	Environment and Development	
MGMT 3480	Business Ethics & Responsibility	
PHIL 3200	Environmental Aesthetics	
GEOG 3329	Geographical Perspectives on Nature (Group A)	
Select three credit-hours in an approved B.E.S. elective at the 2000 level or above from BIOL, CHEM or GEOL [2]		3
Select three credit-hours in an approved B.E.S. elective at the 2000 level or above from ANCS, ENGL, HIST, PHIL or RELS [2]		3
Select three additional credit-hours in an approved B.E.S. elective at the 2000 level or above [2]		3
Three (3) credit-hours of free electives		3
	Credit Hours	**30**
Fourth Year		
Nine (9) credit hours in core capstone courses:		9
ENVS 4440	Environmental Policy	
ENVS 4499	Environmental Seminar	
Nine (9) credits of approved B.E.S. electives at the 2000-level or higher [3]		9

Twelve (12) credit-hours of free electives	12
Credit Hours	**30**
Total Credit Hours	**120**

1 Chosen from Biology, Chemistry, Environmental Science, Geology, Mathematics, Physics and Astronomy and/or Computing Science.
2 See list below.
3 Honours students are required to take BES Honours Thesis (BEST 4599) (six credit hours) plus three credit hours in approved B.E.S. electives at the 2000-level or higher.

List of Approved B.E.S. Elective Courses

Code	Title	Credit Hours
ACST 4631	Environmental History of Atlantic Canada	3
ACST 4632	Atlantic Canada Ecology and Resources	3
ACST 4633	Reading the Landscapes of Atlantic Canada	3
ANCS 1001	Ancient Civilizations of the Near East and Egypt (formerly CLAS 1001)	3
ANCS 1002	The Ancient Civilizations of Greece and Rome (formerly CLAS 1002)	3
ANCS 3317	Greek Sanctuaries (formerly CLAS 3317)	3
ANCS 3318	Classical Archaeology (formerly CLAS 3318)	3
ANCS 3610	Field Study in Archaeology (formerly CLAS 3610)	3
ANTH 1202	Introducing Socio-Cultural Anthropology	3
ANTH 2602	Environment & Culture	3
ANTH 3100	Evolution of the Anthropocene	3
ANTH 3602	Coping with a Changing Climate	3
BIOL 1211	Molecular and Cell Biology	3
BIOL 1212	Organismal and Ecological Biology	3
BIOL 2324	Ecology	3
BIOL 3303	Plant Biology (formerly BIOL 2303)	3
BIOL 3308	Biostatistics	3
BIOL 4410	Plant Ecology	3
BIOL 4422	Conservation Biology	3
CHEM 1210	General Chemistry I	3
CHEM 1211	General Chemistry II for Physical Sciences	3
CHEM 1212	General Chemistry II for Life Sciences	3
CHEM 1221	Chemicals	3
ECON 1201	Principles of Economics: Micro	3
ECON 1202	Principles of Economics: Macro	3
ECON 3362	Natural Resource Economics	3
ECON 3363	Environmental Economics	3
EDUC 1000	Introduction to University Education	3
ENGL 1205	Introduction to Literature	3
ENGL 2318	The Writer and Nature	3
ENGL 3518	Canadian Nature Writing	3
ENVS 1200	Environmental Sustainability	3
ENVS 1250	Energy in the Environment	3
ENVS/CHEM 2100	Green Chemistry	3
ENVS 2200	Energy, Resources, and Pollution	3
ENVS/GEOL 3410	Environmental Impact Assessment	3
ENVS 3440	The Environment and Human Health	3
ENVS 3460	Indigenous Experience and Environmental Impact	3
ENVS 4431	Environmental Information Management (formerly ENVS 3430)	3
ENVS 4440	Environmental Policy	3
ENVS 4450/ GEOG 4424	Natural Resource Management	3
ENVS 4460/ GEOG 4444	Environmental Pattern Analysis	3
ENVS 4470	Environmental Remediation and Restoration	3
ENVS 4499	Environmental Seminar	6
GDST 2301	Global Development: History & Perspectives	3
GDST 2302	Global Development: Policies and Issues	3
GDST 2401	Fair Trade and Free Trade	3
GDST 3490	The Everyday Politics of Global Environmental Problems	3
GDST 4410/6635	Global Food Sovereignty and Food Security	3
GDST 4470	Environment and Development	3
GEOG 1100	Global Perspectives on Land and Life (Group D)	3
GEOG 1200	People, Place and Environment (Group D)	3
GEOG 2306	Geospatial Concepts (Group C)	3
GEOG 2310	Geography of Canada (Group D)	3
GEOG 2312	Urban Geography (Group A)	3
GEOG 2313/ GEOL 2373	Geomorphology (Group B)	3
GEOG 2315	The Oceans (Group D)	3
GEOG/GEOL 2325	Sedimentation and Stratigraphy (Group B)	3
GEOG 2332	Global Cities (Group A)	3
GEOG 2333	Biogeography (Group B)	3
GEOG 2341	Economic Geography (Group A)	3
GEOG 2343	Weather and Climate (Group B)	3
GEOG 2349	Cultural Geography (Group A)	3
GEOG 2386	Introduction to Mapping and Geographic Information Systems (GIS) (Group C)	3
GEOG 2390/ IRST 2391	Geography of Ireland (Group D)	3
GEOG 3004	Geography and Environmental Studies in Practice (Group D)	3
GEOG 3100	Geography Field Course (Group D)	6
GEOG 3150	Geography Behind the Headlines (Group D)	3
GEOG 3213	Applied Geomorphology (Group B)	3
GEOG 3302	The Built Environment (Group A)	3
GEOG 3304	Environmental Management (Group D)	3
GEOG 3311	Rural Geography (Group A)	3
GEOG 3320	Geography of the North (Group D)	3
GEOG 3321	Spatial Processes of Economic Globalization (Group A)	3
GEOG 3326	Statistical Methods in Geography (Group C)	3
GEOG 3329	Geographical Perspectives on Nature (Group A)	3
GEOG/ACST 3340	Geography of Nova Scotia (Group D)	3
GEOG 3350	Geography of Africa (Group D)	3
GEOG 3351	Demography and Migration (Group A)	3

GEOG 3356	Remote Sensing of the Environment (Group C)	3
GEOG 3380	Climate Change: Impacts, Vulnerability and Adaptation (Group D)	3
GEOG 3386	Concepts in Geographic Information Systems (GIS) Analysis (Group C)	3
GEOG 3416	Qualitative Research Methods in Geography (Group C)	3
GEOG 3433	River Dynamics, Landforms, and Landscapes (Group B)	3
GEOG 3454	Bay of Fundy: Environments and Issues (Group D)	6
GEOG 4406	Capstone Seminar in Geography (Group D)	3
GEOG 4412	Urban History and Preservation (Group A)	3
GEOG 4413/ GEOL 4476	Coastal Geomorphology (Group B)	3
GEOG 4423/ GEOL 4475	Glaciers and Glaciation (Group B)	3
GEOG 4426	Ecosystem and Natural Area Management (Group D)	3
GEOG 4431	Community and Regional Development (Group A)	3
GEOG 4432	Social Geography of the City (Group A)	3
GEOG 4434	Watershed Management (Group D)	3
GEOG 4442	Urban Planning (Group A)	3
GEOG 4443	Natural Hazards and Climate Change (Group B)	3
GEOG 4449	Tourist Geographies (Group A)	3
GEOG 4459	The Power of Maps: A Social History of Cartography (Group A)	3
GEOG/GEOL 4465	Advanced Sedimentology (Group B)	3
GEOG 4496	Applications in Geographic Information Systems (Group C)	3
GEOL 1202	Planet Earth: Atlantic Canada Perspective	3
GEOL 1203	Earth History: Atlantic Canada Perspective	3
GEOL 1206	Global Change	3
GEOL 1207	Environment, Radiation and Society	3
GEOL 1208	Environmental Geology: Atlantic Canada Perspective	3
GEOL/GEOG 2325	Sedimentation and Stratigraphy	3
GSCI 1300	Introduction to Science Communication	3
GSCI 3300	Advanced Science Communication	3
HIST 1203	The Twentieth Century in Europe	6
HIST 2201	Environmental History of Europe, 1300 - 1900	3
HIST 2202	Environmental History of North America	3
MGMT 3480	Business Ethics & Responsibility	3
PHIL 1200	Critical Thinking	6
PHIL 2305	Environmental Ethics	3
PHIL 2318	Science and Society	3
PHIL 2331	Business Ethics	3
PHIL 3200	Environmental Aesthetics	3
PHYS 1370/ PHIL 1255	Scientific Method	3
POLI 1201	Politics: Contemporary Issues	3
POLI 1210	Political Ideas: “Isms” and Beliefs	3
POLI 1230	Law and Politics	3
POLI 1250	Politics and Globalization	3
POLI 1260	Politics and Development: People, Ideas and Goods	3
POLI 2381	Comparative Politics: Political Regimes and Government Institutions	3
POLI 2383	International Relations I: Actors, Structures, Processes	3
POLI 3245	Public Policy: Theories, Models & Typologies	3
POLI 3246	Public Policy: Practice and Case Studies	3
POLI 3307	Provincial Government and Politics (formerly POLI 2307)	3
POLI 3321	International Organizations	3
POLI 3382	Contentious Politics: Mobilization Today and Tomorrow	3
POLI 3384	International Relations II: Ideas, Identities, Borders (formerly POLI 2384)	3
POLI 4493	Global Social Movements	3
PSYC 2580	Environmental Psychology (formerly PSYC 4418) (Group A)	3
RELS 2342	Violence	3
RELS 2347	Ecology and Religion	3
RELS 3205		3
RELS 3348		3
RELS 3349		3
SJCS 1211	Social Power Relations	3
SJCS 2000	Canadian Society and Social Justice	3
SJCS 2100	Community Organizing	3
SJCS 3408	Urban Social Justice	3
SJCS 3409	Climate Disaster and Social Justice	3
SJCS 3508	Corporate and State Crime	3
SJCS 4570	Indigenous-Settler Relations	3
SOCI 1210	Introductory Sociology	3
SOCI 3310	Society and the Environment	3
SOCI 3491	Rural Sociology	3

Minor in Climate Change Studies

Minor in Climate Change Studies

Climate change is one of the defining environmental and social problems of our lifetime, and one that will become ever more relevant and important as we move into the future. Employers in all fields will increasingly seek to hire those with an understanding of climate change and how it relates to business, public policy, economies and livelihoods, conservation, and human health and happiness. As a student pursuing a specialization in Climate Change Studies, you will engage in an interdisciplinary program of study that prepares you with an understanding of climate change from diverse perspectives, examining scientific, political, psychological, economic, and ethical dimensions of the problem and its solutions. Courses are drawn from disciplines across the University, including Geography and Environmental Studies, Environmental Science, Global Development Studies, and Social Justice and Community Studies.

Learning Goals and Outcomes

The learning goals and outcomes are aligned with and expands upon the established essential principles of climate literacy (NOAA (2022) https://

www.climate.gov/teaching/climate (https://www.climate.gov/teaching/climate/)) including;

- Understanding the reasons and processes that contribute to anthropogenic climate change.
- Identifying and understanding the range of individual and collective human actions contributing to climate change.
- Identifying and understanding the consequences of contemporary climate change with particular attention to vulnerable populations.
- Critically examining and effectively communicating a range of response strategies for the mitigation of and adaptation to climate change.
- Critically examining how humans experience climate change through politics, social organization, and the arts.

Minor in Climate Change Studies Requirements

Code	Title	Credit Hours
Eighteen (18) credit hours required:		**18**
ANTH 3602	Coping with a Changing Climate	
or ANTH 3102	Evolution of the Anthropocene	
ENVS 1200	Environmental Sustainability	
GDST 3490	The Everyday Politics of Global Environmental Problems	
GEOG 1200	People, Place and Environment (Group D)	
GEOG 3380	Climate Change: Impacts, Vulnerability and Adaptation (Group D)	
SJCS 3409	Climate Disaster and Social Justice	
Select six (6) credit hours from the following:		**6**
ENVS 4470	Environmental Remediation and Restoration	
GDST 4470	Environment and Development	
GEOG 2343	Weather and Climate (Group B)	
GEOG 3213	Applied Geomorphology (Group B)	
GEOG 4443	Natural Hazards and Climate Change (Group B)	
Total Credit Hours		**24**