

Sustainability and Environmental Studies

Sustainability and Environmental Studies (SEST) offers a dynamic, interdisciplinary education designed for students passionate about creating a more sustainable and just world.

Grounded in critical thinking, social justice, and community engagement, Sustainability and Environmental Studies invites you to explore the complex relationships between human communities and the natural world.

Whether you're passionate about climate justice, sustainable development, food systems, or global environmental politics, Sustainability and Environmental Studies will equip you with the knowledge and skills for careers that drive real-world impact toward a more just, resilient and sustainable future.

Major in Sustainability and Environmental Studies

To major in Sustainability and Environmental Studies, students must successfully complete 36 credit hours, including:

27 credit hours of required courses:

SEST 1013	Understanding Environmental Problems
SEST 1023	Environmental Praxis: Making Change Happen
SEST 2023	Perspectives on Environment and Society
SEST 2113	Ecological Literacy
SEST 3013	Power, Politics, and the Planet OR SEST 3043: Canadian Environmental Law and Policy
SEST 3023	Environmental Praxis: From Theory to Activism
SEST 3113	Researching Sustainability
SEST 3143	Theories of Sustainability and Change
SEST 4003	Capstone Seminar

9 credit hours from the SEST electives listed here or from the list of cross-listed courses in other departments listed below the list of SEST electives.

2000-level (3 credit hours)

SEST 2043	Communicating Sustainability
SEST 2053	UN Sustainable Development Goals: Critical Perspectives
SEST 2123	Food and Society
SEST 2243	Health at Risk: Environmental Hazards
SEST 2263	Understanding Sustainability
SEST 2313	Energy and Society
SEST 2413	Climate Crisis: Society at a Crossroad

3000-4000 level (6 credit hours)

SEST 3053	Measuring What Matters: Sustainability Reporting
SEST 3133	Building Regenerative Food Systems

SEST 3243	Healthy Planet, Healthy People
SEST 3413	Climate Justice: Political Economy of Climate Change
SEST 3613	Pathways to Community Sustainability
SEST 4103	Work-Study Project (Independent Study)

Other Electives

**Courses with SEST in brackets are cross-listed courses.*

1000 level

BIOL 1503	Principles of Biology I (SEST)
BIOL 1513	Principles of Biology II (SEST)

2000 level

ANTH 2033	Indigenous Lifeways in Canada
CBEL 2023	Foundations of Leadership (SEST 2033)
COPP 2023	Public Engagement (POLS 2333)
CRIM 2743	Social Protest in Canada
ECON 2203	Community Economic Development (SEST)
ECON 2333	Ecological Economics (SEST)
ENGL 2163	Envisioning Environmental End- Times (SEST)
GRBK 2206	Nature, Science and Technology (SEST)
NATI 2203	First Nations Arts & Sciences
NATI 2233	Natural Resources & First Nations of the Maritimes
PHIL 2253	Ethics of Sustainability: Thinking, Acting Green (SEST)
PSYC 2443	Environmental Psychology (SEST)
SOCI 2213	Society & Ecology (SEST)
RELG 2133	Religions & Ecology (SEST)
RELG 2433	Christianity & Ecology

3000 level

ANTH 3323	Hunter-Gatherers in the Modern World (SEST)
ANTH 3723	Human Ecology (SEST)
BUSI 3023	Nonprofit Management (SEST 3033)
CBEL 3023	Applied Leadership (SEST 3153)
COPP 3023	Public Policy & the Media
CRIM 3703	Toxic In/Justice: Green Criminology (SEST)
ECON 3323	Environmental Economics (SEST 3333)
ECON 3333	Perspectives on Underdevelopment
FNAR 3406	Field Course in Art & Ecology (SEST)
HMRT 3233	Environment & Human Rights (SEST)
INTR 3003	Experiential Community-based Internship
JOUR 3333	Journalism & the Natural World
NATI 3203	Native Philosophy
NATI 3223	Native Environmental Ethics & Ecology
NATI 3703	Indigenous & Western Economics & the Idea of Development
NATI 3923	Territorial Claims
POLS 3103	Political Parties & Elections in Canada (SEST)
POLS 3123	The Canadian Constitution: Federalism (SEST)

POLS 3213	Media & Politics in Canada (SEST)
PSYC 3443	Psychology of Human-Nature Connections (SEST)
SOCI 3123	Social Movements, Activism, Change
SOCI 3293	Animals in Society
SOCI 3693	Discourse & Society

4000 Level

PSYC 4443	Seminar in Environmental Psychology (SEST)
-----------	--

Minor in Sustainability and Environmental Studies

The Minor in Sustainability and Environmental Studies consists of 18 credit hours distributed as follows:

Required course: SEST 1013 Understanding Environmental Problems (3 ch)

Three other SEST courses at the 1000-2000 level or higher (9 ch)

Two SEST courses at the 3000-4000 level (6 ch)

Honours in Sustainability and Environmental Studies

Students wishing to complete an Honours in Sustainability and Environmental Studies must maintain a GPA of 3.5 in SEST courses. The Honours option consists of 54 credit hours of study:

All the required courses for the Major (27 credit hours with 15 credit hours at the 3000-4000 level)

18 credit hours of approved SEST electives with 12 credit hours at the 3000-4000 level

3 credit hours Honours Workshop from this list

- INTR 4003 Interdisciplinary Honours Workshop OR approved substitute from another department (with permission)
- ECON 4533 Honours Research Project
- POLS 3913 Honours Thesis Proposal
- SOCI 4023 Honours Workshop
- HMRT 3603 Thesis Proposal

6 credit hours Honours Thesis: SEST 4016: Honours Thesis

Students completing an Honours in Sustainability and Environmental Studies must complete the Honours Workshop and a thesis proposal one year prior to graduation. The Honours program must be approved by the SEST Program Director and will be overseen by a committee consisting of a thesis supervisor and two other faculty members.

SEST-1013. Understanding Environmental Problems

Using the planetary boundaries framework, this course introduces students to how society's energy, food and economic systems are disrupting critical Earth systems such as climate, oceans, and biodiversity. We also consider how those social systems need to change to achieve sustainability.

SEST-1023. Environmental Praxis: Making Change Happen

Praxis means taking action for system change based on values of ecological and social justice. In this course, students learn about environmental activism and apply theories of social change by developing action strategies for local problems. This course may qualify for the experiential learning certificate. Prerequisite: SEST 1013.

SEST-2023. Perspectives on Environment and Society (HMRT 2243)

The way societies understand and interact with the natural world is shaped by the dominant beliefs, assumptions and values of those societies. In this course, students examine the dominant perspectives in industrial societies that give rise to environmental degradation, as well as alternative perspectives offered by Green, ecojustice, Global South, and Indigenous movements that have the potential to heal the Earth. Prerequisite: SEST 1013 or permission of the instructor.

SEST-2043. Communicating Sustainability (COPP)

This course examines how communication shapes public perceptions of environmental problems and solutions to them. Students analyze the communication strategies of various actors (scientists, corporate lobbyists, activists) as they try to influence how the public and decisionmakers understand these issues, and they learn to use various platforms to engage in public conversations about sustainability issues. There is no prerequisite.

SEST-2053. UN Sustainable Development Goals: Critical Perspectives

In 2015 the UN General Assembly approved the 2030 Agenda for Sustainable Development, a set of 17 goals to be met by 2030. These sustainable development goals (SDGs) recognize that human development depends on environmental integrity, social equality, and peace. This course explores the contested meanings of sustainable development, the origins and specific content of the SDGs and the world's progress toward achieving the 2030 Agenda.

SEST-2113. Ecological Literacy

What happens when we turn on the tap, flush the toilet, and flip the light switch? Where does our garbage go; what about local food security; what natural features shape our city? All water, food, energy and materials flow from ecosystems through human systems and back to ecosystems as waste. This field trip-based course introduces students to the ecological and energy flows of our daily lives and examines the implications of these flows for sustainability. This course may qualify for the Certificate in Experiential Learning and Community Engagement.

SEST-2123. Food and Society

Everyone eats, and by eating we are all connected to the global industrial food system which has the greatest cumulative environmental impact of any economic sector. This course takes a critical look at food systems and our relationship to them, including Indigenous and Global South perspectives, and movements for food sustainability, security, and sovereignty. Prerequisite: Must have completed 27 credit hours of coursework.

SEST-2243. Health at Risk: Environmental Hazards

Good health and wellbeing depend on clean air and water, nutritious food, functioning ecosystems, a stable climate, peace, and security. Conversely, pollution, climate change, ecological destruction, and conflict have devastating health impacts, especially for the most vulnerable populations. Using a public health framework, this course introduces the concept of ecological determinants of health and their intersection with social determinants of health. This course is open to all students with 27 credit hours of completed course work.

SEST-2263. Understanding Sustainability

This course introduces the concept of sustainability as encompassing three dimensions -ecological, socioeconomic, and personal. Students examine the origin of the concept, the various, often contradictory interpretations and debates around its meaning, and what strong sustainability looks like in practice.

SEST-2313. Energy and Society

This course focuses on the energy system that drives modern society, its various sources and technologies (fossil fuels, nuclear, renewables), and their environmental and economic impacts. Students examine what a sustainable energy system looks like, and the transition needed to achieve it. There is no prerequisite.

SEST-2413. Climate Crisis: Society at a Crossroad

In this course, students examine the processes and root causes of climate change, the impacts of the changing climate on ecological and social systems, the system changes necessary to avoid climate breakdown, and how those changes can come about. There is no prerequisite for this course.

SEST-3013. Power, Politics and the Planet (POLS)

Problems such as climate change, species extinctions and toxic chemical pollution are global and require the cooperation of many nations to solve. This course examines the mechanisms for multilateral cooperation on environmental problems, particularly through the United Nations, and the politics involved in getting agreement among nations with diverse and competing interests, including the dynamics of the power imbalances between Global North and Global South states.

SEST-3023. Environmental Praxis: Theory Meets Activism (HMRT 3223)

This course explores how alternative visions of the future translate into political action at the international, national, provincial, community, and personal levels. This involves an analysis of alternative theories of the nature of social change. A component of this course may be service learning. Prerequisites: Must have completed 27 credit hours of coursework.

SEST-3043. Canadian Environmental Law and Policy

To a great extent, the state of the natural environment in Canada depends on laws and policies adopted by municipal, provincial and federal governments. This course introduces students to these systems of government, the processes by which environmental laws and policies are developed, and the power relations that shape the outcomes. Topics include endangered species, toxic chemicals, plastics and global warming. Prerequisite: students must have completed 30 credit hours of courses before enrolling in this course.

SEST-3053. Measuring What Matters: Sustainability Reporting for Action

Many institutions and businesses are using sustainability report cards to measure their progress towards sustainability. They are graded on indicators such as greenhouse gas emissions, energy and water consumption, waste production, use of chemicals, and extent of green space. This course examines theories, principles and design of sustainability reporting frameworks, and the design and implementation of action plans based on report cards. Student projects will include connecting with STU's climate change action plan. The course may qualify for the Certificate in Experiential Learning and Community Engagement. There is no prerequisite.

SEST-3113. Researching Sustainability

This course introduces the idea of research for sustainability, the application of social science research methods to assist the transition to a sustainable society. Methods such as participatory action research, case studies, interviewing, surveys, and critical policy analysis are examined in the context of real research projects at the community, institutional and sectoral levels. Prerequisite: SEST 2263

SEST-3133. Building Regenerative Food Systems

Regenerative food systems improve the environment rather than degrade it, as industrial food systems do. This course introduces the knowledge systems, values and design principles on which regenerative food systems are based. Students apply their learning to real projects on campus and in the Fredericton area. This is an experiential learning course. Prerequisite: Must have completed 27 credit hours of university coursework.

SEST-3143. Theories of Sustainability and Change

This course examines the various theories that underpin the fields of environmental studies and sustainability studies. These include systems theories, eco-political theories such as ecological justice and ecofeminism, political ecology, sustainable materialism, and critical discourse theory. Prerequisite: ENVS 2023.

SEST-3243: Healthy Planet, Healthy People

The concept of Planetary Health recognizes the crucial links between human wellbeing and the health of Planet Earth. This course introduces students to the planetary health framework for health promotion and advocacy, a systems-based analysis of the environmental drivers of mental and physical illness, and the system changes that would result in healthy people and a healthy planet. Prerequisite: Must have completed 27 credit hours of courses

SEST-3413. Climate Justice: The Political Economy of Climate Change

The course examines how the dynamics of capitalism create both the conditions for climate change and the economic inequalities that result in those least responsible for climate change bearing the brunt of its impacts. There is no prerequisite for this course.

SEST-3613. Pathways to Community Sustainability

The transition to sustainable societies begins with communities where we live and make our living. This course examines how communities can provide basic services such as water, energy, food, waste management and mobility to all residents equitably and fairly while staying within the productive capacity of living ecosystems. Prerequisite: Must have completed 27 credit hours of university coursework.

SEST-4003. Capstone Seminar

This is a required course for the Major in Sustainability and Environmental Studies which is designed to integrate the entire program of study. The seminar will focus on developing a multidisciplinary understanding of a selection of environmental issues as determined by student and faculty interests. Issues considered will include ecological damage, social origins, and alternative approaches to addressing problems. Prerequisites: SEST 3013 and SEST 3023 or permission of the instructor.

SEST-4103. Work-Study Project

This is a course in experiential learning for students in the final year of their Major in SEST. Students will work with a non-profit organization which is actively involved in addressing environmental problems. Each student's activities will be designed under the direction of a

faculty supervisor in consultation with the student and the work-place mentor. Enrolment is subject to the approval of the Coordinator of the Sustainability and Environmental Studies program.

Cross-Listed Courses

ANTH-3323. Hunter-Gatherers in the Modern World (SEST)

This course begins by exploring the definitions of hunter-gatherers and by examining what sets them apart from other peoples. Early evolutionary views of hunter-gatherers are contrasted with current research on the diverse economic foundations of hunter-gatherer societies. The course covers questions of identity, property rights, gender, modes of production, and distribution of resources, drawing upon examples from various geographical areas. Prerequisite: ANTH 1013.

ANTH-3723. Human Ecology (SEST)

Since its beginning, anthropology has been interested in the relationship between people and the geographical setting where cultures develop. The history of the discipline is full of contrasting examples in which nature and culture are used, within different conceptual and methodological frames, to explain cultural change, social structure, cultural development, and landscape history, among other topics. The main objective of this course is to explore such different approaches using examples from different biogeographical regions. Prerequisite: None.

BIOL-1503. Principles of Biology I (SEST)

This course introduces students to the study of life. Topics include the scientific method, biological molecules, cell structure and function, energy flow, respiration, and photosynthesis.

BIOL-1513. Principles of Biology II (SEST)

This course examines mitosis, meiosis, and genetics. Surveys the structure, function, and evolution of the kingdoms of life. Discusses the basics of ecology, culminating in ecological interactions and the impact of humans on the planet.

BUSI-3023. Nonprofit Management (SEST 3033)

The course introduces students to the specific issues that arise in managing nonprofit organizations. Topics covered include strategic planning, accountability, board governance, financial planning, fund raising, and human resources.

CBEL-2023. Foundations of Leadership (SEST 2033)

This course builds a foundation for understanding the field of leadership and how it can apply in the lives of students. Theories and models of leadership, including historical, contemporary, and critical, will be explored. The course promotes leadership as a process rather than a position. It has practical and community-based elements to develop leadership skills, style, and identity in community settings. Throughout the course students reflect on personal experiences and real-life examples through the lens of the theories covered in the course to develop their own leadership philosophy.

CBEL-3023. Applied Leadership (SEST 3153)

Emphasis in this course is on the practice of leadership, development of leadership skills, and critical reflection on applied leadership. This course involves an applied leadership project in an organization of the student's choosing, during which they explore the roles, responsibilities and challenges involved in effective leadership. Class time includes group discussion of core concepts, reflections on the leadership project, and learning activities designed to

develop leadership skills, including team-building strategies, conflict management, strategic planning, change management, and inclusive leadership. Students assess their own leadership skills and style and complete a leadership portfolio. This is an ideal course for students in leadership roles on campus or in the community or aspiring to develop their leadership capacity.

CRIM-3703. Toxic In/Justice: Green Criminology (SEST)

This course is designed to study harms against the environment writ large, and actions designed to protest and protect against those harms. Topics include environmental pollution in nature, home and workplace; relevant law and policy; corporate crimes against humanity; and, environmental protest and justice movements. Prerequisites: CRIM 1013 and CRIM 1023 or permission of the instructor.

ECON-2203. Community Economic Development (SEST)

A course which explores the theory and practice of community economic development. It will include the examination of case studies of successful community economic development. The focus will be on the appropriateness and applicability of the model to the Maritimes.

ECON-2333. Ecological Economics (SEST)

Starting from the understanding that the economy is a subsystem of the ecological lifesupport system, the course utilizes a transdisciplinary approach (ecological, social and economic) to examine the problems of scale, equity, and efficiency in contemporary human social formations. The course will also discuss the distinctive policy implications of ecological economics. No prerequisite required.

ECON-3323. Environmental Economics (SEST-3333)

An examination of the relationship between the ecological system, economics, and institutions. Topics covered may include such issues as technological choice, steady state economics, limits to growth, the adequacy of the market mechanism, world food supplies, the economics of conservation, and alternative futures.

ENGL-2163. Envisioning Environmental End-Times (SEST)

It may be impossible to represent the scale, timespan, and complexity of climate change. And yet, as a direct corollary, scientists and storytellers have made myriad attempts: avant-garde poetry, apocalyptic film, realist novels, abstract sculpture, and heat maps, among other forms. This course explores how these media experiments have tried and failed to represent the reality of environmental collapse, and considers the consequences for our understanding of language, truth, and the planet's very existence. (Post-1800.)

FNAR-3406. Field Course in Art and Ecology (SEST)

In association with our six field trip locations, participants create artwork informed by existing field based, social, or relational art practices; merging media such as drawing, performance, printmaking, music, dance, and sculpture with a place, to develop artwork. A transition from a classroom-based instruction into an ecological environment, it is a method of experiential learning. Using social dislocation engendered by pandemic isolation as an entry point for thinking through the parameters of art, we will venture into wild and semi-wild places to create art and consider how people relate to each other through art that has an ecological grounding.

GRBK-2206. Nature, Science, and Technology (SEST)

What is humanity's relationship to nature? Are humans natural beings, or uniquely free? How does the scientific revolution change humanity's relationship to nature? Modern science and technology have undoubtedly made life easier, but have there been costs? By studying works of natural science-ancient and modern-philosophy, literature, and theology we will explore various historical perspectives on nature and consider the consequences - both good and bad - of our technologically mediated lives. Fulfills Group C Requirement.

HMRT-3233. Environment and Human Rights (SEST)

This course will explore the impact of climate change and environmental degradation on the realization of human rights, focusing on those in the economic, social, and cultural realm, including the right to a clean environment, clean air, water, food, and health. The long-term impact of climate change will also be examined in the context of trends in migration and human security. Prerequisite required: HMRT 1003.

PHIL-2253. The Ethics of Sustainability: Thinking, Acting Green (SEST)

An historically-conscious analysis of various normative stances in environmental ethics integrated with a sustained consideration of how to apply this ethical theory to modern life. Topics may include deep and shallow ecology, biocentrism, eco-feminism, environmental justice, environmental virtue ethics, the ambiguous role of technology in the environmental crisis, the ethics of the green economy, the ethics of green public policy, a survey of various locally-employed environmental initiatives. Recommended preparation: PHIL 2213.

POLS-3103. Political Parties and Elections in Canada (SEST)

Canada's major national parties are examined in regard to their historical evolution, internal structure, ideological orientation, and public image and reputation. Trends in voting behaviour are discussed, as are the implications of voting patterns in Canada. Distinctive provincial political parties (such as the Parti Quebecois) are also considered.

POLS-3123. The Canadian Constitution: Federalism (SEST)

This course will focus on the manner in which the evolution of constitutional law has shaped the Canadian federal system. The course will proceed primarily by means of class discussion of leading constitutional decisions and by student presentations.

POLS-3213. Media and Politics in Canada (COPP 3033, SEST)

This course will examine the role of media in Canadian politics and government. It will examine the effect of media on policy agenda setting and public opinion, and how political elites seek to use media to advance political goals. Prerequisite: POLS 1013, or permission of the instructor.

PSYCH-2443. Environmental Psychology (SEST)

Human behaviour is at the heart of a wide range of such environmental problems as global warming, ozone depletion, pollution, species extinction, deforestation, and population growth. This course emphasizes the positive role that psychology can play in supporting those human values, attitudes, and behaviour that will help to resolve these crises and advance the attainment of a sustainable future.

PSYC- 3443. Psychology of Human-Nature Connections (SEST)

This course focuses on examining human connection to nature. The course includes in-class and outdoor experiential learning components. Topics may include: the role of nature in relation to health and psychological well-being, social and community aspects of human-nature interaction, and a critical examination of nature-oriented therapeutic approaches. Pre-requisites: PSYC 2023 (Intro to Research Methods)

PSYC-4443. Seminar: Environmental Psychology (SEST)

Building upon PSYC 2443 Environmental Psychology, this seminar explores in greater detail the contributions psychology can make to the resolution of a broad range of environmental crises. The course will examine key values, attitudes, and behaviours that would support a sustainable future, and the contributions that psychology can make to the promotion of a sustainable future. Prerequisite: PSYC 2013 and 2023 or permission of the instructor.

RELG-2133. Religion and Ecology (SEST)

Many religious traditions display a variety of stances towards the environmental crisis, ranging from indifference to reform. Through critical and comparative study, this course explores religious approaches to ecology in a variety of traditions. Topics may include environmental stewardship, deep ecology, ecoliberation, ecofeminism and ethnic indigenous ecology.

SOCI-2213. Society and Ecology (SEST)

This course is an introduction to the sociological study of environmental problems and the issues they raise, using C. Wright Mills' notion of the 'sociological imagination.

NOTE: Not all courses listed are offered each year. Please consult with the Department Chair for more information about current and planned course offerings.