York University SDG Course Inventory SDG 13 – Climate Action

13 CLIMATE ACTION



SDG 13 Climate Action is about invoking climate action through necessary education, innovation, and adherence to climate change commitments. Global emissions and pollution must be limited through changing economic and social practices, and the creation of new green technologies.

With the goal to become <u>net-zero before 2040</u>, York takes climate action incredibly seriously. A number of SDG 13 relevant programs are taught through the <u>Faculty of Environmental and Urban Change</u>, the <u>Faculty of Science</u>, and the <u>Lassonde School of Engineering</u>. Course topics include natural sciences, climate change science & modelling, atmospheric science, meteorology and geography.

<u>Click Here</u> to learn more about York's initiatives towards accomplishing SDG 13 <u>Click Here</u> to learn more about the United Nations' SDG 13 targets and goals

SDG 13 Courses at YU

Primary SDG	Secondary SDG	Ancillary SDG	Total Courses
31	12	0	43

<u>Click Here</u> to access York University's full course inventory



COURSE TITLE	FACULTY	SUBJECT	CODE	CREDIT	DESCRIPTION	LANGUAGE	PRIMARY SDG	SECONDARY SDG	ANCILLIARY SDG
Nature, Culture, Power: The Anthropology of Environment	Faculty of Liberal Arts & Professional Studies	ANTH	4240	3	What is nature? How is it kept apart from culture? How do anthropologists analyze environmental destruction and climate change? This course explores these questions from an anthropological perspective. It draws on examples from across the globe to examine cultural practices, ideologies and discourses that result in environmental loss and focuses on local struggles that fight for environmental justice. Course credit exclusion: AP/ANTH 4240 3.00 (prior to Winter 2012).	en	SDG 13 Climate Action		
Physiology of Global Change	Faculty of Graduate Studies	BIOL	5153	1.5	Focuses on global environmental change (past and present) covering broad ranges of topics: from changing global temperatures to ocean acidification. Changing environments are discussed in terms of the resulting physiological stresses and adaptations that have occurred/are occurring in diverse taxa. Emphasis is placed on basic physiology principals, biochemistry, and molecular biology in the context of evolution and ecology.	en	SDG 14 Life Below Water	SDG 13 Climate Action	
Chemistry of the Natural and Polluted Atmosphere	Faculty of Graduate Studies	СНЕМ	6060	3	Course credit exclusion: Chemistry 5710 3.0 may not also be taken for credit.	en	SDG 13 Climate Action		
Introductory Atmospheric Chemistry	Faculty of Science	СНЕМ	3060	3	An introductory course linking chemistry and atmospheric science. Topics include atmospheric evolution; biogeochemical cycles; sources, transformations and sinks of atmospheric species; human impacts such as acid rain, photochemical smog and depletion of the ozone layer. Prerequisites: Both SC/CHEM 1000 3.00 and SC/CHEM 1001 3.00; one of SC/MATH 1014 3.00, SC/MATH 1310 3.00, SC/MATH 1505 6.00 or SC/MATH 1507 3.0. Course Credit Exclusions: LE/EATS 3130 3.00 (prior to Fall 2014), SC/EATS 3130 3.00 (prior to Summer 2013).	en	SDG 13 Climate Action		
Civil Engineering for a Sustainable Future	Lassonde School of Engineering	CIVL	4210	3	Essential components of sustainable development framework; review of completed and on-going civilengineering projects using such a framework; discussions on environmental, socio-economic impacts and costs of these projects; sustainable development strategies in the light of infrastructure deficit, adaption of infrastructure to climate change, and water security; ways of building sustainable engineering capacity in urban centres. Prerequisite: LE/CIVL 4110 3.00; ES/ENVS 2150 3.00 or LE/ESSE 2210 3.00.	en	SDG 13 Climate Action		

Climate Change: International Governance, Mitigation and Adaptation	Faculty of Graduate Studies	EIL	6588	This course focuses on the current international legal and policy frameworks in place to address the global phenomenon of climate change. These frameworks have been developed over time and include the United Nations Framework Convention on Climate Change (UNFCCC), as well as the Paris Agreement which highlights the key points for the post-2020 climate change regime including Nationally Determined Contributions (NDCs). In addition, students will learn about the following topics in relation to climate change and law: (1) Foundational concepts regarding the science of climate change; (2) Strategies to reduce greenhouse gas emissions and strategies to adapt to climate change; (3) The economics of climate change and the role of a economics and climate finance in addressing climate change.	en	SDG 13 Climate Action		
Introduction to Climate Change Science and Policy	Faculty of Environmental & Urban Change	ENVS	3400	This course is intended to provide a critical overview of the field with particular attention paid to emerging trends in science and planning systems. Description of the theoretical underpinnings of planning, the application and development of Decision Support Systems, as well as the introduction of case studies, will provide students with the background needed to deal with the particularities of regional planning issues of climate change adaptation(CCA). This course builds on EU/ENVS 1500 6.00 and EU/ENVS 2420 3.00 or EU/ENVS 3402 3.00 Prior to FALL 2020: ES/ENVS 1500 6.00 and ES/ENVS 2420 3.00 or ES/ENVS 3402 3.00 Prerequisite: Third-year or fourth- year standing or by permission of the instructor.	en	SDG 13 Climate Action		
Environmental History	Faculty of Environmental & Urban Change	ENVS	3120	Examines the culture-environment relationship in historical perspective. The focus is on ways in which social change is triggered by environmental change and vice-versa. Case studies illustrate general patterns of change, such as those associated with the introduction of alien species, new modes of agricultural production. Prerequisite: Third-year or fourth- year standing or 3 by permission of the instructor.	en	SDG 13 Climate Action		
Economics for the Anthropocene	Faculty of Environmental & Urban Change	ENVS	2510	The application of economic principles to environmental issues is introduced and critically reviewed. Linkages between economic factors, social processes and natural environments are explored. The use of economic principles in deriving solutions to issues of climate change, resource management, and environmental regulation is examined. This course is intended for students with no background in economics.	en	SDG 8 Decent Work and Economic Growth	SDG 13 Climate Action	

Northern Ecosystems: A Natural History of Arctic Regions	Faculty of Environmental & Urban Change	ENVS	4447	Examines the interactions between species and their environment in northern terrestrial and marine habitats. We review the postglacial history, climate, and energy flow in boreal and arctic ecosystems and examine evolutionary adaptations to cold, highly-seasonal environments. We consider strategies for wildlife management and conservation and the threats posed by climate change, resource development, and pollution. Prerequisite: EU/ENVS 3402 3.00 or EU/ENVS 2420 3.00 or permission of the Instructor. PRIOR TO FALL 2020: ES/ENVS 3402 3.00 or ES/ENVS 2420 3.00	en	SDG 14 Life Below Water	SDG 13 Climate Action	SDG 15 Life on Land
Cities,Regions and Planning in a Globalizing World	Faculty of Environmental & Urban Change	ENVS	1210	Cities and urban regions are the predominant human habitat. This introductory level course covers the fundamentals of urban studies knowledge in a world shaped by globalization. It explains the process of urbanization through time (history) and space (geography). Urban planning and politics are introduced as professional practices in citybuilding under the impression of the climate emergency and similar planetary challenges.	en	SDG 11 Sustainable Cities and Communities	SDG 13 Climate Action	
Global Environmental Politics	Faculty of Environmental & Urban Change	ENVS	3340	Examines the interrelationship between globalization and environment. It analyzes the historical development of the global environmental system and theoretical approaches to understanding the global environment. It considers the main actors, institutions and legal instruments related to global environmental issues. The environmental impacts of, and political responses to, such phenomena as global warming, trade, structural adjustment, transnational corporate activity, foreign aid, environmental security, and biodiversity depletion are studied. Prerequisite: Third-year or fourth- year standing or by permission of the instructor.	en	SDG 1 No Poverty	SDG 13 Climate Action	
Climate Variability and Climate Change	Faculty of Graduate Studies	ESS	5170	This course surveys key physical and dynamical processes responsible for both the natural variability in Earth's climate, as well as recent anthropogenic climate change. Models of global atmospheric and oceanic circulation and derived reanalysis datasets. Impacts of recent and future climate change, including long-term changes in climate extremes, and potential mitigation and adaptation strategies. Integrated with LE/ESSE 4160 3.0.	en	SDG 13 Climate Action		
Numerical Weather Prediction	Faculty of Graduate Studies	ESS	5204	The development of computational techniques for the solution of problems in atmospheric dynamics; the construction of numerical models for the prediction of weather.	en	SDG 13 Climate Action		
Cloud Physics and Radar Meteorology	Faculty of Graduate Studies	ESS	5205	Thermodynamics of cloud processes. Buoyancy and convection. Weather radar. Storms and associated precipitation. Cloud droplet formation and growth of ice crystals. Snow, graupel and hail. Microphysical processes and climate. Prerequisite or corequisite: SC/EATS 3030 3.00.	en	SDG 9 Industry, Innovation and Infrastructure	SDG 13 Climate Action	

Remote Sensing of the Atmosphere	Faculty of Graduate Studies	ESS	5230	A study of the theory, instrumentation and applications of remote sensing methods of terrestrial and planetary atmospheres from space platforms. Topics include atmospheric radiation, atmospheric spectroscopy, inversion theory, instrumentation, satellites, space platforms and future technology. Prerequisites: SC/EATS 2010 3.00 or SC/PHYS 2060 3.00; SC/MATH 1025 3.00; SC/MATH 2015 3.00; SC/MATH 2271 3.00. Prerequisite or corequisite: SC/EATS 3030 3.00 or permission of the Instructor.	en	SDG 9 Industry, Innovation and Infrastructure	SDG 13 Climate Action	
Introduction to Atmospheric Science	Lassonde School of Engineering	ESSE	1011	The origin, composition and vertical structure of the Earth's atmosphere and those of other planets. The present global atmospheric circulation. Weather systems, measurements and weather maps; atmospheric chemistry; the ozone layer and atmospheric pollution. Five three-hour laboratory sessions. Prerequisites: 12U Calculus and vectors or 12U advanced functions or equivalent; SC/MATH 1515 3.00; 12U physics or SC/PHYS 1510 4.00. Course credit exclusions: LE/EATS 1010 6.00 (prior to Fall 2014), SC/EATS 1010 6.00 (prior Summer 2013), SC/NATS 1750 6.00. Previously offered as: 3 LE/EATS 1011 3.00.	en	SDG 13 Climate Action		
Introduction to Climate Science	Lassonde School of Engineering	ESSE	2020	This course surveys key physical and dynamical processes responsible for maintaining Earth's climate. Components of the climate system. Energy balance of the climate system, radiative processes, the hydrological cycle, the general circulations in the atmosphere and ocean. The roles of these processes in setting both global-mean and regional climate under both annual-mean and seasonal-mean conditions is discussed extensively. The relevance of these processes for recent climate change is also discussed. Prerequisites: LE/ESSE 1011 3.00 or LE/ESSE 1012 3.00 or EU/GEOG 1401 3.00 or EU/GEOG 1400 6.00; SC/MATH 1013 3.00 and SC/MATH 1014 3.00, or equivalents; LE/EECS 1011 3.00 or LE/EECS 1520 3.00 or LE/EECS 1540 3.00 or LE/EECS 1541 3.00; SC/PHYS 1010 6.00 or SC/PHYS 1012 3.00 or SC/PHYS 1801 3.00 or SC/ISCI 1302 3.00 or SC/ISCI 1310 6.00 or any of the following with a minimum grade of C in each course: SC/PHYS 1410 6.00 or SC/PHYS 1420 6.00 or SC/PHYS 1412 3.00 or SC/PHYS 1422 3.00	en	SDG 13 Climate Action		
Engineering and the Environment	Lassonde School of Engineering	ESSE	2210	This course surveys a variety of Canadian case studies in environmental sustainability from an engineering perspective. The goal of this course is to provide students with exposure to the social aspects of large infrastructure projects, including the environmental assessment and stakeholder consultation processes. Climate change mitigation and adaptation are strong themes of this course.	en	SDG 13 Climate Action		

Atmospheric Radiation and Thermodynamics		ESSE	3030	Applications of basic thermodynamic principles to dry and moist atmospheric situations. Solar (short wave) and terrestrial (long wave) radiation with respect to absorption and scattering processes involving atmospheric atoms, molecules, aerosol particles and clouds. Prerequisites: SC/MATH 2015 3.00; SC/MATH 2271 3.00; SC/PHYS 1012 3.00; or SC/PHYS 1010 6.00; or any of the following acceptable substitutes: SC/PHYS 1801 3.00; or SC/ISCI 1310 6.00; or SC/ISCI 1302 3.00; or any of the following with a minimum grade of C in each course: SC/PHYS 1410 6.00; SC/PHYS 1420 6.00; SC/PHYS 1412 3.00; SC/PHYS 1422 3.00	en	SDG 13 Climate Action	
Atmospheric Dynamics I	Lassonde School of Engineering	ESSE	3040	Dynamics of large-scale weather systems. Development of the equations of motion, geostrophy, thermal wind, vorticity and divergence, Ekman layers and the quasi-geostrophic theory. Prerequisites: LE/ESSE 2010 3.00; LE/ESSE 2470 3.00 or SC/PHYS 2010 3.00; SC/MATH 2015 3.00; SC/MATH 2271 3.00. PRIOR TO FALL 2014: Prerequisites: LE/EATS 2010 3.00; SC/MATH 2271 3.00. PRIOR TO SUMMER 2010 3.00; SC/MATH 2015 3.00; SC/MATH 2271 3.00. PRIOR TO SUMMER 2013: Prerequisites: SC/EATS 2010 3.00; SC/EATS 2470 3.00 or SC/PHYS 2010 3.00; SC/MATH 2015 3.00; SC/MATH 2271 3.00.	en	SDG 13 Climate Action	
Introductory Meteorology	Lassonde School of Engineering	ESSE	2010	An introduction to atmospheric radiation and thermodynamics, clouds and precipitation. Vertical soundings and an introduction to the analysis and interpretation of tephigrams. Atmospheric motion on the global, synoptic, meso- and micro-scales. Prerequisites: Corequisite: SC/MATH 2015 3.00; Prerequisites: SC/MATH 1013 3.00 and SC/MATH 1014 3.00 or equivalents; LE/EECS 1541 3.00; SC/PHYS 1012 3.00; or SC/PHYS 1010 6.00; or any of the following acceptable substitutes: SC/PHYS 1801 3.00; or SC/ISCI 1310 6.00; or SC/ISCI 1302 3.00; or any of the following with a minimum grade of C in each course: SC/PHYS 1410 6.00; SC/PHYS 1420 6.00; SC/PHYS 1412 3.00; SC/PHYS 1422 3.00.	en	SDG 13 Climate Action	
Atmospheric Dynamics II	Lassonde School of Engineering	ESSE	4130	The theory and behaviour of Rossby, baroclinic and internal gravity waves in the atmosphere, including their origin, structure and propagation. Barotropic and baroclinic instability and the global circulation of the atmosphere. Prerequisite: LE/ESSE 3040 3.00. PRIOR TO FALL 2014: Prerequisite: LE/EATS 3040 3.00. PRIOR TO SUMMER 2013: Prerequisite: SC/EATS 3040 3.00.	en	SDG 13 Climate Action	

Numerical Weather Prediction	Lassonde School of Engineering	ESSE	4140	The development of computational techniques for the solution of problems in atmospheric dynamics. The construction of numerical models for the prediction of weather. Prerequisites: LE/ESSE 3040 3.00; LE/EECS 1540 3.00 or equivalent FORTRAN programming experience. Prerequisite or corequisite: LE/ESSE 4130 3.00 strongly recommended. PRIOR TO FALL 2014: Prerequisites: LE/EATS 3040 3.00; LE/CSE 1540 3.00 or equivalent FORTRAN programming experience. Prerequisite or corequisite: LE/EATS 4130 3.00 strongly recommended. PRIOR TO SUMMER 2013: Prerequisite or corequisite: SC/EATS 4130 3.00 strongly recommended.	en	SDG 13 Climate Action		
Climate Variability and Climate Change	Lassonde School of Engineering	ESSE	4160	This course surveys key physical and dynamical processes responsible for both the natural variability in Earth climate, as well as recent anthropogenic climate change. Models of global atmospheric and oceanic circulation and derived reanalysis datasets. Impacts of recent and future climate change, including long-term changes in climate extremes, and potential mitigation and adaptation strategies. Prerequisite: LE/ESSE 2020 3.00 or LE/ESSE 3030 3.00; LE/ESSE 2010 3.00 or LE/ESSE 2012 3.00 or LE/ESSE 3040 3.00 or LE/CIVL 2210 4.00 or LE/MECH 3202 3.00 or SC/PHYS 4120 3.00; or 3 permission of the instructor	en	SDG 13 Climate Action		
Cloud Physics and Radar Meteorology	Lassonde School of Engineering	ESSE	4120	Thermodynamics of cloud processes. Buoyancy and convection. Weather radar. Storms and associated precipitation. Cloud droplet formation and growth of ice crystals. Snow, graupel and hail. Microphysical processes and climate. Prerequisite or corequisite: LE/ESSE 3030 3.00. PRIOR TO FALL 2014: Prerequisite or corequisite: LE/EATS 3030 3.00. PRIOR TO SUMMER 3 2013: Prerequisite or corequisite: SC/EATS 3030 3.00.	en	SDG 9 Industry, Innovation and Infrastructure	SDG 13 Climate Action	
Remote Sensing of the Atmosphere	Lassonde School of Engineering	ESSE	4230	An introduction to and summary of the area of remote sensing of the atmosphere from space platforms and from the ground. Topics include atmospheric radiation, atmospheric spectroscopy, inversion theory, instrumentation, satellites, space platforms and future technology. Prerequisites: LE/ESSE 2010 3.00 or SC/PHYS 2060 3.00; SC/MATH 1025 3.00; SC/MATH 2015 3.00; SC/MATH 2271 3.00. Prerequisite or corequisite: LE/ESSE 3030 3.00 or permission of the Instructor. PRIOR TO FALL 2014: Prerequisites: LE/EATS 2010 3.00 or SC/PHYS 2060 3.00; SC/MATH 1025 3.00; SC/MATH 2015 3.00; SC/MATH 2271 3.00. Prerequisite or corequisite: LE/EATS 3030 3.00 or permission of the Instructor. PRIOR TO SUMMER 2013: Prerequisites: SC/EATS 2010 3.00 or SC/PHYS 2060 3.00; SC/MATH 1025 3.00; SC/MATH 2015 3.00; SC/MATH 2271 3.00. Prerequisite or corequisite: SC/EATS 3030 3.00 or permission of the Instructor.	en	SDG 9 Industry, Innovation and Infrastructure	SDG 13 Climate Action	

Case Studies in Stakeholder Accountability for Sustainability	Faculty of Graduate Studies	FACC	6190	Examines applied issues of ecological, ethical and economic integration through a stakeholder accountability lens. Case studies and current events are used to explore issues such as fossil fuel development and climate change, globalization and labour standards, and financial instability and inequality. The focus is on managing diverse and competing stakeholder 3 interests that arise in the context of sustainability.	en	SDG 13 Climate Action		
Physical Geography: Weather and Climate	Faculty of Environmental & Urban Change	GEOG	1401	What is climate change and how will it impact the environment? Learn how Earth's climate and weather systems work and explore the drivers of current and past climatic change. Discover how climate and climate change influence global biodiversity patterns. Gain practical experience applying the scientific method to address pressing environmental challenges related to climate change. Course Credit Exclusions: EU/GEOG 1400 6.00; AP/GEOG 1400 3 6.00; SC/GEOG 1400 6.00	en	SDG 13 Climate Action		
Climatology of High Latitudes	Faculty of Environmental & Urban Change	GEOG	4205	A study of the processes of energy and moisture exchanges in polar regions with emphasis on the Canadian north. Topics include atmospheric and oceanic transport of energy, surface microclimate and the sensitivity of high latitude environments to climate change. Normally offered in alternate years. Prerequisites: 54 credits successfully completed, including AP/GEOG 2400 6.00 or SC/GEOG 2400 6.00 or written permission of the Instructor.	en	SDG 13 Climate Action		
The End of the Earth as We Know It: Global Environmental Change	Faculty of Environmental & Urban Change	GEOG	2030	This course explores how human society has transformed the earth system and investigates the social, economic and political implications of contemporary environmental change. Topics include deforestation, climate change, biodiversity loss and natural disasters such as hurricanes, flooding and drought. Internet access is required. Recommended prerequisites: 3 AP/GEOG 1000 6.00, AP/GEOG 1400 6.00 and AP/GEOG 1410 6.00.	en	SDG 13 Climate Action		
20th-Century Canada	Faculty of Liberal Arts & Professional Studies	HIST	3580	An analysis of the major events and developments affecting Canadian society during the past hundred years, including political and constitutional evolution, economic and social change and alterations in the climate of ideas.	en	SDG 13 Climate Action	SDG 16 Peace, Justice and Strong Institutions	
Global Environmental Challenges VǬñ Local Solutions / DVɬ©fis environnementaux mondiaux - solutions locales	Glendon College	ILST	4275	Ce cours expv@rientiel communautaire examine les dv@fis environnementaux mondiaux avec un accent sur l'urgence climatique. Il dv@veloppe des solutions locales pour crv@er une v@conomie circulaire sur le campus Glendon. This community based experiential learning course explores global environmental challenges with specific reference to the current climate emergency and develops local solutions based on a circular economy on the Glendon Campus.	fr	SDG 13 Climate Action		

Weather and Climate	Faculty of Science	NATS	1780	The weather and health of our atmosphere affect us all. This course provides an overview of the Earth's atmosphere; its chemistry, physics and dynamics; an introduction to meteorology and weather forecasting; and a discussion of climate. Canada's weather and climate are emphasized. Course credit exclusions: LE/EATS 1011 3.00 (prior to Fall 2014), SC/EATS 1011 3.00 (prior to Summer 2013), SC/NATS 1750 6.00. Not open to any students enrolled in the Earth and Atmospheric Science program.	en	SDG 13 Climate Action	
Science, Experts and Citizens	Faculty of Science	NATS	1765	Provides tools with which to better think about the relationship between science, scientific experts, citizens and what people think they know. We cover different cases in which claims about technical scientific facts interact, and often clash, with political and social arguments about those facts. Cases may include vaccination, anthropogenic climate change and what to do about it, and genetic engineering. For each case we first cover a 'primer' on the technical issues - for instance learning how a gene codes for a protein - so that after this course when you come across such material you'll be better able to correctly grasp the relevant points. But we also study the enduring tension between expertise and democratic populism, the distinction between risk and uncertainty, and whether ignorance is a lack of knowledgeor the wrong knowledge confidently held. While no one can become an expert after taking a single course, this course will help you better think about some of the most important issues of our time. Course credit exclusions: SC/NATS 1760 6.00.	en	SDG 13 Climate Action	
The Earth and Its Atmosphere	Faculty of Science	NATS	1750	In this course we describe the physical properties and characteristics of Earth as an active system. We will look at the overall structure of Earth and how it is a dynamic system. Plate tectonics, the constantly changing surface of Earth, the nature of water and oceans and the atmosphere will be covered. We will also address how these different elements interact. We will touch briefly on other solar system bodies, and how they may be similar to or different from Earth. We will also look at how geology plays a role in the mineral resources on Earth. The effect and interaction with life will also be touched on. Course credit exclusions: SC/NATS 1570 3.00, SC/NATS 1780 6.00, LE/EATS 1010 3.00, LE/EATS 1011 3.00, SC/EATS 1011 3.00. Not open to any student who has passed or is taking a course in earth and atmospheric science. PRIOR TO SUMMER 2013: Course credit exclusions: SC/NATS 1780 6.00, SC/EATS 1010 3.00, SC/EATS 1011 3.00.	en	SDG 13 Climate Action	

Atmospheric Pollution	Faculty of Science	NATS	1515	Course Description: Everyday human activities, such as driving vehicles, cooking food and using electricity, can all be important sources of pollution to Earth's atmosphere. During this course, students explore the major contributors to atmospheric pollution globally, explain their source and transport through the Earth's systems, and examine their impact on human and environmental health. Modern day local pollution phenomena, such as smog and acid rain, as well as global-scale concerns, such as the Antarctic Ozone Hole and climate change, are explored in detail. New government policies and green technologies that are used to minimize the damaging effects of atmospheric pollution are discussed. Pre-requisite: NATS 1512 3.00. Course Credit Exclusions: SC/NATS 1840 6.00, SC/NATS 1750 6.00. No credit will be retained for any student who has passed or is taking SC/CHEM 1000 3.00 or SC/CHEM 1001 3.00. Not open to any students enrolled in a Chemistry program.	en	SDG 11 Sustainable Cities and Communities	SDG 13 Climate Action	
Managing Change	Schulich School of Business	ORGS	4350	As the environment of many business and non-profit organizations becomes increasingly complex and unstable, it is imperative that top managers be able to create a climate of flexibility and adaptability in their operations. Organizations must be able to undertake major change without destructive side effects to be truly successful. This course surveys the major methods available to the modern manager for effectively managing the process of change and creating a general climate in which needed changes are sought and welcomed throughout the organization. Previously offered as: SB/OBIR 4350 3.00. Prerequisites: SB/ORGS 2100 3.00 (previously offered as SB/ORGS 1000 3.00) (or equivalent) and SB/ORGS 2200 3.00 (previously offered as ORGS 2010 3.00) (or equivalent) or SB/INTL 2300 3.00	en	SDG 13 Climate Action		
Managing Change	Schulich School of Business	ORGS	6350	As the environment of many business and non-profit organizations becomes increasingly complex and unstable, it is imperative that top managers be able to create a climate of flexibility and adaptability in their operations. Organizations must be able to undertake major change without destructive side effects to be truly successful. This course surveys the major methods available to the modern manager for effectively managing the process of change and creating a general climate in which needed changes are sought and welcomed throughout the organization. The course emphasizes case studies and the discussion of alternative change management models. Prerequisite: SB/ORGS 5100 3.00 or SB/INTL 5220 3.00 for IMBA students.	en	SDG 13 Climate Action		

Physics of the Space Environment	Faculty of Science	PHYS	3280	An introduction to the physical processes of the upper atmosphere, the ionosphere, the magnetosphere and the heliosphere, and the interactions that occur with space vehicles that traverse these regions of space. Prerequisites: SC/PHYS 2020 3.00, SC/MATH 2271 3.00. Course Credit Exclusions: LE/EATS 3280 3.00 (prior to Fall 2014), SC/EATS 3280 3.00 (prior to Summer 2013).	en	SDG 13 Climate Action		
Global Governance & Politics in Comparative Perspective	Faculty of Liberal Arts & Professional Studies	POLS	4440	The global order is undergoing fundamental changes, giving rise to increasingly complex problems of international organization and global governance - including international economic inequality and instability, conflict and peace-building, global environmental change, international development assistance, and humanitarian crises and intervention. How are these problems addressed at the global level? Are the mechanisms for addressing these challenges effective or just? The course addresses the above questions, giving focused attention to two dimensions of global change, the rising powers, and global governance.	en	SDG 11 Sustainable Cities and Communities	SDG 13 Climate Action	SDG 16 Peace, Justice and Strong Institutions
Urban Environmentalism and Urban Sociology	Glendon College	SOCI	4620	Environmental change is making a major impact on cities and, in turn, is changing the experience of city life. The course examines this intersection of environmental sociology and urban sociology, which is emerging as a major global planning issue, for example in the two recent UN Habitat reports on sustainable cities (2009) and cities and climate change (2011).	en	SDG 11 Sustainable Cities and Communities	SDG 13 Climate Action	
Introduction to Science, Technology and Society	Faculty of Science	STS	1411	This course introduces students to ways of thinking critically about the connections between science, technology and society through case studies on important issues such as global climate change, food production, the digital landscape and biotechnology. Hands-on activities offer a direct understanding of the diversity of materials, settings, people and activities that shape science, technology and our relationships to them. NCR: STS 2411 3 3.00 (Prior to W2022).	en	SDG 13 Climate Action		