

2016/2017 Dalhousie Sustainability Learning Outcomes Inventory

Degree programs or majors were defined as having a sustainability learning outcome if the program had a stated sustainability learning outcome on the departmental website, in the course calendar, or in other relevant documentation, or if all graduates were required to take a sustainability course as identified in the sustainability course inventory.

Faculty	Major	Level	Sustainability Learning Outcomes	Graduates Counted	Rationale
Architecture & Planning	Community Design	UG	Yes	11	The Bachelor of Community Design (BCD) is a three-year program that explores ways in which people can work towards creating and maintaining healthy and sustainable communities. If you are eager to make changes in the world, the BCD will help you develop the knowledge and skills to allow you to analyse issues facing communities, such as food security, just cities, sustainable transportation, and affordable housing. You will learn how to develop solutions to these pressing concerns in communities of different sizes. Our students care about the future of communities, are committed to sustainable urban systems, and want to learn how to develop better designed environments. They are interested in protecting environmentally-sensitive landscapes and heritage neighbourhoods, and want to give communities the tools to make their own choices.
	Environmental Planning	UG	Yes	8	Same as Community Design
	Urban Design & Planning	UG	Yes	18	Same as Community Design
	Environmental Design Studies	UG	Yes	59	Same as Community Design
	Architecture	G	Yes	35	CACB-accredited program includes general studies, professional studies, and electives, which ensure that graduates will be technically competent and critical thinkers capable of defining multiple career paths within a changing societal context. More specifically, the CACB requires an accredited program to produce graduates who are competent in a range of intellectual, spatial, technical, and interpersonal skills; who understand the historical, socio-cultural, and environmental context of architecture; who are able to solve architectural design problems (including the integration

					of technical systems and health and safety requirements); and who comprehend the roles and responsibilities of an architect in society.
	Planning	G	Yes	22	The School of Planning encourages initiative, resourcefulness, and creative questioning of received doctrine. The curriculum of the School emphasizes: (a) specialized knowledge of theory and practice of planning; (b) up-to-date skills; (c) a sound appreciation of the environmental, social, and economic processes that shape the form and character of communities; (d) the active contribution of students in confronting and resolving contemporary planning problems in local communities; and (e) the development of personal capabilities suited to the leadership roles that planners assume.
Arts & Social Sciences	Costume Studies	UG	No		
	Classics	UG	No		
	English	UG	No		
	Environment, Sustainability & Society	UG	Yes	30	Sustainability-centered program
	French	UG	No		
	Gender and Women's Studies	UG	No		
	German	UG	No		
	History	UG	No		
	Indigenous Studies (Certificate)	UG	Yes	4	Students are required to take SOSA2052 Contemporary Issues in Indigenous Studies. Two of the three elective courses (one is required for the certificate) also have sustainable learning outcomes and are included in the sustainable course inventory (CANA3052 Indigenous Social Health and Environmental Issues and IPHE2201 Introduction to Aboriginal Peoples' Health and Healing).
	International Development Studies	UG	No		
	Music	UG	No		
	Philosophy	UG	No		

	Political Science	UG	No		
	Religious Studies	UG	No		
	Russian Studies	UG	No		
	Sociology and Social Anthropology	UG	No		
	Spanish and Latin American Studies	UG	No		
	Theatre	UG	No		
	Classics	G	No		
	English	G	No		
	French	G	No		
	German	G	No		
	History	G	No		
	International Development Studies	G	No		
	Philosophy	G	No		
	Political Science	G	No		
	Social Anthropology	G	No		
	Sociology	G	No		
Faculty of Agriculture	Engineering (Diploma)	UG	No		
	Business Management (Diploma)	UG	Yes	28	Required courses include AGRN2001 Forage-Based Cropping Systems. Students are also required to take APSC0200.02 Environmental Management and PLSC0100 Utilization of Plant Resources.
	Managed Landscapes (Diploma)	UG	No		
	Plant Science (Diploma)	UG	Yes	3	Students are required to take PLSC0100 Utilization of Plant Resources. We did not include technical courses in the Sustainability Course Inventory but this shows that students who graduate with this diploma graduate with sustainable learning outcomes.
	Veterinary Technology (Diploma)	UG	No		

	Environmental Landscape Horticulture	UG	Yes	4	Students are required to take ENVA2000, Environmental Studies I and ENVA2001, Environmental Studies II, ENVA3004, Principles of Pest Management, HORT3000 Environmental Processes and Natural Landscape Functions
	International Food Business	UG	Yes	17	One Essential Graduation Competency (EGC) is Sustainability, defined as follows: Graduates will demonstrate good stewardship of the world's limited resources.
	Agricultural Business	UG	Yes	16	Students are required to take AGRI1000, Agricultural Ecosystems
	Agricultural Economics	UG	Yes	10	Students are required to take AGRI1000, Agricultural Ecosystems
	Animal Science	UG	Yes	63	Students are required to take AGRI1000, Agricultural Ecosystems
	Aquaculture	UG	Yes	10	Students are required to take AGRI1000, Agricultural Ecosystems
	Environmental Sciences	UG	Yes	12	Students are required to take AGRI1000, Agricultural Ecosystems, ENVA2000, Environmental Studies I and ENVA2001, Environmental Studies II, BIOA3001, Ecology, ENVA3001, Environmental Sampling and Analysis, ENVA3002, Waste Management and Site Remediation, ENVA3004, Principles of Pest Management, HORT3000 Environmental Processes and Natural Landscape Functions, ENVA4006, Air, Climate and Climate Change and ENVA3000, Environmental Impact Assessment.
	Integrated Environmental Management	UG	Yes	8	Students are required to take AGRI1000, Agricultural Ecosystems, ENVA2000, Environmental Studies I, APSC3020, Energy Production and Utilization, ENVA3002, Waste Management and Site Remediation, APSC3015, Irrigation and Drainage, APSC4006, Wastewater Management, APSC4004, Energy Conversion and Management, and APSC4005, Waterscape Ecology and Management
	Plant Science	UG	Yes	11	Students in Plant Science are required to take AGRI1000, Agricultural Ecosystems, BIOA3002, Weed Science, SOIL2000 Introduction to Soil Science, and SOIL3000 Soil Fertility and Nutrient Management.
	Agriculture	G	No		

Faculty of Computer Science	Applied Computer Science	UG	No		
	Computer Science	UG	No		
	Informatics	UG	No		
	Computational Biology & Bioinformatics	G	No		
	Computer Science	G	No		
	Electronic Commerce	G	No		
	Health Informatics	G	No		
Faculty of Dentistry	Dental Hygiene	UG	No		
	Dentistry	G	No		
	Periodontics	G	No		
Faculty of Engineering	Food Science	UG	No		
	Chemical Engineering	UG	Yes	50	<p>All students are required to take HSTC1801 History of Engineering and Technology. The Course Learning Outcomes for HSTC 1801 as stated on the course syllabus is: “Students in this class will be able to...</p> <ul style="list-style-type: none"> • Analyze the technological, social, ethical, economic, and environmental impacts of significant events in the history of technology and engineering. • Develop a personal perspective on the importance of engineering and technology in society and world history. • Interpret and apply a professional engineering codes of ethics. • Find, evaluate, and use historical/technical/ethical sources of information. • Critically read, understand and interpret written historical and ethical arguments. • Communicate effectively in written documents (essays).” <p>Sample questions on the final exam include: What are the three “pillars” of sustainable development? What is environmental racism and what role do engineers have in preventing it? Justify</p>

					your answer using at least one of the guidelines on sustainable development.
	Civil Engineering	UG	Yes	63	<p>All students are required to take CIVL3451, Water Quality and Treatment. Students in the Earth and Environment stream are also required to take CIVL4440, Water and Wastewater Treatment and ENVE4772, Environmental Assessment and Management, HSTC1801 History of Engineering and Technology (described above) and CPST 3030.03 Engineering in Society II.</p> <p>“CPST 3030.03 provides an overview of the concepts and interrelationships among sustainable development, environmental stewardship and public health and safety in relation to engineering practice. These concepts will be examined through historical examples and current theory and practice of the engineering profession. Lectures and discussion will consider global ecosystem functions, human interactions with the environment, methods of reducing human impacts; methods of achieving sustainability, engineering challenges to enhance sustainable development; and factors that influence occupational health and safety from engineering and management viewpoints. Students will be exposed to management methods and tools such as environmental auditing, ISO 14000, risk analysis and WHMIS and will be expected to consider class topics in relation to their own area of engineering specialization.”</p>
	Electrical Engineering	UG	Yes	67	All students are required to take CPST 3030.03 Engineering in Society II (as described above).
	Environmental Engineering	UG	Yes	23	All students are required to take CIVL3451, Water Quality and Treatment, ENVE3461, Environmental Measurement & Analysis, LAWS2800, Introduction to Environmental Law, ENVE 3500 Air Quality, CIVL4440, Water and Wastewater Treatment, ENVE4772, Environmental Assessment and Management, CIVL4460 Solid Waste & Landfill Engineering, ENVE3521 Environmental and Industrial Microbiology, CPST 3030.03 Engineering in Society II (as described above) and HSTC1801 History of Engineering and Technology (described above).

	Industrial Engineering	UG	No		
	Materials Engineering	UG	No		
	Mechanical Engineering	UG	Yes	69	All students are required to take CPST 3030.03 Engineering in Society II (as described above)
	Mineral Resource Engineering	UG	Yes	42	All students are required to take CPST 3030.03 Engineering in Society II (as described above) and HSTC1801 History of Engineering and Technology (as described above).
	Biomedical Engineering	G	No		
	Chemical Engineering	G	No		
	Civil Engineering	G	No		
	Electrical and Computer Engineering	G	No		
	Environmental Engineering	G	Yes	10	This program is comprised of faculty from different departments in the Faculty of Engineering who have research interests in the multidisciplinary field of Environmental Engineering. Graduate education in Environmental Engineering develops a strong foundation in science and engineering principles which are applied to the solution of important problems related to sustainable utilization of natural resources and protection of the environment. Areas of study include energy and the environment, soil and water quality management, waste management and remediation, pollution control, and environmental assessment
	Industrial Engineering	G	No		
	Internetworking	G	No		
	Materials Engineering	G	No		
	Mechanical Engineering	G	No		
	Mineral Resource Engineering	G	No		
	Engineering Mathematics	G	No		
	Food Science	G	No		
Faculty of Health	Emergency Health Services Management	UG	No		
	Health Services Administration	UG	No		

	Diagnostic Medical Ultrasound Technology	UG	No		
	Respiratory Therapy	UG	No		
	Medical Lab Technology	UG	No		
	Nuclear Medicine Technology	UG	No		
	Radiological Technology	UG	No		
	Respiratory Therapy	UG	No		
	Health Promotion	UG	No		
	Kinesiology	UG	No		
	Nursing	UG	No		
	Nursing for Registered Nurses	UG	No		
	Nursing	UG	No		
	Pharmacy	UG	No		
	Recreation	UG	No		
	Social Work	UG	No		
	Health Promotion	G	No		
	Audiology	G	No		
	Clinical Vision Science	G	No		
	Human Communication Disorders	G	No		
	Kinesiology	G	No		
	Occupational Therapy	G	No		
	Occupational Therapy - Post Professional	G	No		
	Physiotherapy	G	No		
	Rehabilitation Research	G	No		
	Speech-Language Pathology	G	No		
	Health Administration	G	No		
	Nursing	G	No		

	Social Work	G	No		
Law	Business Law	UG	No		
	Environmental Law	UG	Yes	3	
	Health Law and Policy	UG	No		
	Marine Law	UG	Yes	1	
	Law	G	Partial	10	Marine and Environmental Law graduates
Faculty of Management	Commerce	UG	Yes	207	Required to take COMM2310 Business Ethics and Corporate Social Responsibility
	Management	UG	Yes	120	Required to take MGMT2402 Marketing Applications for Not-for-Profit Sectors
	Business Administration	G	Yes	71	All students are required to take BUSI6900, Corporate Responsibility, Ethics and Society
	Environmental Studies	G	Yes	13	Sustainability-centered degree (Master in Environmental Studies) is a program of the School for Resource and Environmental Studies (SRES). SRES is one of the four schools in the Faculty of Management.
	Information Management	G	No		
	Library and Information Studies	G	No		
	Public Administration	G	Partial (not Management program)	24	Students are required to take MGMT5000 Management Without Borders.
	Resource and Environmental Management	G	Yes	16	Sustainability-centered degree (Master in Resource and Environmental Management) is a program of the School for Resource and Environmental Studies (SRES). SRES is one of the four schools in the Faculty of Management.
Faculty of Medicine	Medical Sciences	UG	No		
	Medicine	G	No		
	Anatomy & Neurobiology	G	No		
	Biochemistry & Molecular Biology	G	No		
	Community Health and Epidemiology	G	No		
	Medical Research	G	No		

	Microbiology & Immunology	G	No		
	Pathology	G	No		
	Pharmacology	G	No		
	Physiology & Biophysics	G	No		
Faculty of Science	Biochemistry	UG	No		
	Biology	UG	Yes	141	Students are required to take BIOL1011 Principles of Biology Part II and BIOL2060 Introductory Ecology.
	Chemistry	UG	No		
	Earth Science	UG	Yes	41	Students are required to take EARTH1091 Geology II.
	Economics	UG	Yes	94	Economics analyzes the equity, efficiency, and sustainability of human behavior in the production, distribution, and consumption of commodities. All students are required to take ECON1101 Principles of Microeconomics.
	Environment, Sustainability & Society	UG	Yes	4	Sustainability-centered major
	Environmental Science	UG	Yes	23	Sustainability-centered major with most courses included in the Sustainability Course Inventory.
	Marine Bio	UG	Yes	69	Students are required to take BIOL1011 Principles of Biology Part II, BIOL2060 Introductory Ecology. Program and electives are centered on marine conservation.
	Mathematics	UG	No		
	Microbiology	UG	No		
	Neuroscience	UG	No		
	Ocean Sciences	UG	Yes	3	The ocean controls climate, feeds the planet, and connects people and economies around the world. The best way to learn about these vital functions is to experience the ocean environment firsthand—and Dalhousie, with a world-wide reputation for excellence in ocean education and research, is just steps away from the Atlantic Ocean. Societies around the globe are striving to develop and protect valuable ocean resources. Addressing this dual challenge requires a new generation of scientists able and willing to explore multi-faceted and interconnected ocean processes. By combining biology, chemistry, geology, physics and social sciences, our Ocean Sciences degree is designed to prepare you to tackle

					some of society's most exciting ocean opportunities and pressing environmental challenges.
	Physics	UG	No		
	Psychology	UG	No		
	Statistics	UG	No		
	Biology	G	No		
	Chemistry	G	No		
	Earth Science	G	No		
	Mathematics	G	No		
	Medical Physics	G	No		
	Oceanography	G	No		
	Physics	G	No		
	Psychology	G	No		
	Statistics	G	No		
	Economics	G	No		
	Marine Management	G	Yes	22	Course requirements include MARA5001 Contemporary Issues in Ocean and Coastal Management and MARA5009 Coastal Zone Management.
			TOTAL	1555	