

Notes:

- In order to be included in our inventory, a course must have been offered *at least once* between the **Fall 2014** and **Winter 2017** semesters, inclusive.
- Certain course types were included from our inventory, as allowed by AC1. Certain courses which are considered to be an excluded type may still be included in this document designated by an asterisks (\*) after the course name. These courses have been included in order to create a comprehensive list of sustainability courses, but were not included in the final count of sustainability courses used in AC1
- **Differences from 2014 STARS Submission**
  - The definition of “Sustainability Course” and “Course that includes Sustainability” have been provided by AASHE
  - Courses that teach quantitative methods (such as matrices, econometrics or statistics) that can be applied to resource and environmental problem can only count as sustainability-focused or related if their primary and explicit focus is on sustainable applications (Example: AREC 214)

## Faculty of Agriculture, Life, and Environmental Sciences - Sustainability Courses:

Agriculture, Life, and Environmental Sciences (ALES):

### **ALES 291 - Topics in Agricultural, Life and Environmental Sciences\***

Offered by various departments depending upon the content of the course in a given year.

Instructor: Kathryn Aitken [kaitken@ualberta.ca](mailto:kaitken@ualberta.ca)

Rational: Core course for Certificate in Sustainability when topic is “Urban Plants, Gardening and Sustainability”

\*Not included for the purposes of STARS credit AC1

Agriculture and Resource Economics (AREC)

## **AREC 173 - The Plate, the Planet and Society**

A cornerstone course that provides an introduction to social perspectives on everything from what we eat for breakfast to how we protect endangered species and agricultural landscapes. Topics covered include current issues around food production and consumption and issues related to sustainability of our natural and social systems. Debates over new technologies (e.g., GMOs, nanotechnology), food, environment, and health can only be understood in the context of political, economic and personal decisions.

Offered: F14, 15, 16

Professor: Dr. Brent Swallow

Rational: Jillian Pratt put this course forwards, a foundational course with a primary and explicit focus on sustainability of food systems, also a core course for Certificate in Sustainability. [Syllabus](#)

## **AREC 365 - Natural Resource Economics**

Economics of natural resources; resource scarcity, conservation, sustainability, water resource issues, fisheries, forestry, agriculture, recycling, property and tenure institutions, and public resource policy.

Offered: F14, W15, F15, W16, F16, W17

Professor: Dr. Marty Luckert [marty.luckert@ualberta.ca](mailto:marty.luckert@ualberta.ca)

Rational: [Syllabus](#): Put forwards by Jillian Pratt, this course focuses on applying economic theory to conservation and sustainability issues. Considered an elective course for the Certificate in Sustainability

## **AREC 465 - Advanced Natural Resource Economics**

Applied economic modeling of resource utilization and environmental issues with a focus in forestry and agriculture. Topics may include current Canadian and international issues in the area of environmental valuation, energy, climate change, biodiversity and conservation as related to Forestry and Agriculture.

Offered: W15, 16, 17

Professor: (2016) Dr. Bruno Wichmann [bwichmann@ualberta.ca](mailto:bwichmann@ualberta.ca)

Rational: [syllabus](#). Course description mentions that course uses advanced economic modelling to

look at resource utilization and environmental issues. Continuation of AREC 365 which also focuses on sustainability issues

## **AREC 471 - Society and Well-Being**

Economic, political, historical, and legal perspectives on how and why governments promote well-being in areas such as food safety, nutritional policy, consumer protection, recreation, and the workplace. Topics include the historical development of wellness-related policies, how these decisions are made in society, and economic and moral justifications for such interventions.

Offered: W15, 16, 17

Instructor: Dr. Ellen Goddard [egoddard@ualberta.ca](mailto:egoddard@ualberta.ca)

Rational: recommended by Jillian Pratt as touching on "Social Wellbeing, Economic Prosperity". Considered an elective course for the Certificate in Sustainability and considered focused for STARS 2014

## **AREC 565 - Economic Valuation of Ecosystem Services**

Economic valuation of ecosystem goods and services. Topics include: Theoretical and empirical analysis of environmental valuation methods, advanced benefit cost analysis, welfare economics, valuation of ecosystem goods and services, valuation of health impacts from environmental quality change, and linkages to experimental and behavioral economics.

Offered: W16

Instructor: Dr. Wic Adamowicz [adamowic@ualberta.ca](mailto:adamowic@ualberta.ca)

Rational: course focus is an essential tool for including environmental factors into development decisions and environmental assessment.

## **AREC 569 - Advanced Topics in Natural Resource and Environmental Economics\***

Theoretical analysis and modeling of renewable resource and environmental issues at local and global levels. Includes analysis of international environmental issues, the effect of economic growth on the environment, sustainable development, and local and global commons

management.

Offered: F14, 15, 16

Instructor: Bruno Moreira Wichmann [moreiraw@ualberta.ca](mailto:moreiraw@ualberta.ca)

Rational: [Syllabus](#), recommended by Tonia Harris as related, but I believe its core as the focus of the course is to use economic tools to study fundamental problems of sustainability.

\*Not included for the purposes of STARS credit AC1

## Environmental and Conservation Sciences (ENCS)

### **ENCS 352 - Natural Resource and Environmental Law**

Overview of Canadian laws and policies designed to control air, land, and water pollution including licensing systems, quasi-criminal sanctions, and environmental impact assessment processes. The course will also review relevant constitutional issues and consider alternative legal approaches to the resolution of environmental problems.

Offered: F14, 15, 16

Instructor: Jodie Hierlmeir [hierlmei@ualberta.ca](mailto:hierlmei@ualberta.ca)

Rational: [Syllabus](#). Course focuses on environmental law in Canada. Considered an elective course for the Certificate in Sustainability.

### **ENCS 473 - Environmental and Conservation Policy**

An overview of principles and programs relating to environmental and conservation policy. Selected local, national, and international environmental policy issues.

Offered: F14, W15, F15, W16, F16, W17

Instructor: Dr. Brent Swallow [bswallow@ualberta.ca](mailto:bswallow@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability.

## **ENCS 673 - Environmental and Conservation Policy**

An overview of principles and programs relating to environmental and conservation policy. Selected local, national, and international environmental policy issues.

Offered: F14, W15, F15, W16, F16, W17

Instructor: Dr, Brent Swallow [bswallow@ualberta.ca](mailto:bswallow@ualberta.ca)

Rational: focus of the course is on the study of environmental policy and policy issues

Cross-listed

Human Ecology (HECOL):

## **HECOL 493 - Selected Topics in Textiles and Clothing\***

Normally offered in Spring or Summer. Can be taken for credit more than once if the topics are different.

Offered: Sp15, Sp16

Instructor: Krista Willis [kirsta@ualberta.ca](mailto:kirsta@ualberta.ca)

Rational: [Syllabus](#), “designing for Sustainability” (Spring 2015) considered core course for Certificate in Sustainability. Sp16 topic “Gender and the Material World” also sustainability related.

\*Not included for the purposes of STARS credit AC1

Nutrition and Food Sciences (NU FS)

## **NU FS 377 - Introduction to Nutrition in the Community**

Examination of nutritional problems in contemporary communities. Community nutrition seeks to improve diets and nutritional status of whole populations by working at the community, provincial, national and international levels. Discussion of nutrition programs and resources.

Offered: W15, 16, 17

Instructor: Karena Apps Eccles [apps@ualberta.ca](mailto:apps@ualberta.ca)

Rational: Improving community nutrition has implications for social sustainability.

Nutrition (NUTR):

## **NUTR 477 - Advanced Community Nutrition**

Builds on concepts learned in introductory community nutrition that relate to health promotion, food security, policy, program planning and community nutrition throughout the lifecycle. Students will develop the skills to write a community grant application. Field trips to places and events that relate to community nutrition.

Offered: F14, 15, 16

Instructor: Dr. Anna Farmer [farmer1@ualberta.ca](mailto:farmer1@ualberta.ca)

Rational: [syllabus](#), course focuses on examining nutrition through various lenses, and solving problems on how to improve community nutrition

Plant Science (PL SC):

## **PL SC 200 - Urban Plants: Gardening and Sustainability**

A hands-on, experiential education course taught at Devonian Botanic Garden. Students will learn relevant plant anatomy, an introduction to horticultural methods, garden plant basic needs, soil development, pruning practice, vegetable production examples, and contrast between home gardening and commercial production systems. Discussions and readings will incorporate sustainable practices, food security, local food movement, and environmental footprint.

Offered: Su15, 16

Instructor: Lee Foote [lfoote@ualberta.ca](mailto:lfoote@ualberta.ca)

Rational: put forwards by Jillian Pratt, this hands on course focuses on sustainable gardening practices and the intersection of gardening and sustainability

Rural Sociology (R SOC):

## **R SOC 355 - Rural Communities and Global Economies**

The historic and contemporary role of rural regions and extractive economies in the global marketplace is discussed from a macrosociological perspective. Sociological concepts are applied to the study of the structural constraints and opportunities facing social and economic systems in rural regions. Prerequisite: \*30 or more of university level course work.

Offered: W15, 16, 17

Instructor: Dr. John Parkins [jparkins@ualberta.ca](mailto:jparkins@ualberta.ca)

Rational: considered a core course for the Certificate in Sustainability

## **R SOC 365 - Sociology of Environment and Development**

Examines the relationship between development and environment at the local, regional, national and international levels. Critically discusses development strategies, the environmental and social forces promoting them, and the distribution of environmental and social impacts. Also examines alternative development strategies, sustainable development experiences and relevant international policy.

Offered: F14, 15, 16

Instructor: Mamta Vardhan [vardhan@ualberta.ca](mailto:vardhan@ualberta.ca)

Rational: [Syllabus](#), courses focuses on the social and environmental consequences of development. Jillian Pratt recommended.

## **R SOC 375 - Public Participation and Conflict Resolution**

The anatomy of environmental and resource management conflict is examined through a lens of critical sociological theory and deliberative democracy. Focusing on contemporary case studies of conflict in energy production, forestry, conservation and protected areas management, social practices and strategies for conflict resolution are explored.

Offered: W15, 16 (2), 17(2)

Instructor: Dr. John Parkins [jparkins@ualberta.ca](mailto:jparkins@ualberta.ca)

Rational: recommended by Jillian Pratt, course focuses on environmental and resource

management conflicts.

## **R SOC 410 - Research Methods and Policy Applications in Applied Environmental Sociology**

Empirical applications of theory and methods used in environmental sociology, rural sociology, and natural resource sociology. Involves one or more case study projects that focus on conceptual understandings, field research methods, and policy analysis in the human dimensions of resource management.

Offered: W16, 17

Instructor: Debra Davidson [ddavidso@ualberta.ca](mailto:ddavidso@ualberta.ca)

Rational: according to course description, all course aims focus on understanding “human dimensions of resource management”

## **R SOC 443 - Resilience and Global Change**

This course explores the links between community and environmental sustainability using the lens of social-ecological resilience. What values/beliefs, knowledge, practices and norms have contributed towards the sustainability of local resources and ecosystems? How are small social groups demonstrating resilience in the face of larger scale political, economic, cultural, and environmental change? Drawing on interdisciplinary social science literature, the course critically discusses concepts, theories and issues of resilience from around the globe. Graduate students may not register for credit (see R SOC 543).

Offered: F16

Instructor: Brenda Parlee [bparlee@ualberta.ca](mailto:bparlee@ualberta.ca)

Rational: recommended by Jillian Pratt. Course focuses on “community and environmental sustainability using the lens of social-ecological resilience”

## **R SOC 450 - Environmental Sociology**

Introduction to a field in sociological inquiry that addresses how individuals and groups influence, and are influenced by, natural resources and environmental conditions. Examination of individual-level influences, such as beliefs, attitudes, and behaviors, as well as broader social-level



influences at the institutional and organizational level. Focus is on providing an understanding and appreciation for the interaction between human attitudes, behaviors, and organizations with other components of the ecosystem.

Offered: W15, 16, 17

Instructor: Naomi Krogman [nkrogman@ualberta.ca](mailto:nkrogman@ualberta.ca)

Rational: recommended by Jillian Pratt

## **R SOC 460 - Perspectives on Traditional Knowledge**

Traditional Knowledge is recognized as integral to environmental sustainability and the social and cultural well-being of indigenous peoples. The course focuses on the development of Traditional Knowledge as a field of inquiry and policy debate in Canadian society. Critical attention to the history, politics and theory behind its definition, classification and use will provide students with perspectives on its importance in addressing emergent issues of environmental change.

Offered: F14, 15

Instructor: Brenda Parlee [bparlee@ualberta.ca](mailto:bparlee@ualberta.ca)

Rational: [Syllabus](#), recommended by Jillian Pratt. Focus of the course is on Traditional Knowledge and the study of Traditional Knowledge in environmental management decisions, and in ensuring the wellbeing of indigenous populations.

## **R SOC 543 - Resilience and Global Change**

This course explores the links between community and environmental sustainability using the lens of social-ecological resilience. What values / beliefs, knowledge, practices and norms have contributed towards the sustainability of local resources and ecosystems? How are small social groups demonstrating resilience in the face of larger scale political, economic, cultural, and environmental change? Drawing on interdisciplinary social science literature, the course critically discusses concepts, theories and issues of resilience from around the globe.

Offered: F16

Instructor: Brenda Parlee [bparlee@ualberta.ca](mailto:bparlee@ualberta.ca)

Rational: recommended by Tonia Harris

**Cross listed**

## **R SOC 558 - The Sociology of Environmental Risk: Theory and Applications**

Theoretical and empirical research on the study of environmental risk in the social sciences, and their application in various institutional areas. Divergent theoretical perspectives on risk within the social sciences, directions taken by empirical researchers in the analysis of the construction and perception of environmental risk, as well as current institutional mechanisms for risk management and social impact assessment.

Offered: W17 (2)

Instructor: Dr. Debra Davidson [ddavidso@ualberta.ca](mailto:ddavidso@ualberta.ca)

Rational: the sociological study of environmental risk, as well as the theory of risk management and social impact assessment is all central to social sustainability.

## **R SOC 559 - States, Social Movements and the Environment**

Covers classic and contemporary theories of states and social movements and their application to environmental and ecological issues. Topics include the Environmental State; relationships among state and societal forces; sub-national, national, and international environmental politics; political distinctions among environmental and ecological issues; and the potential for sustainability governance.

Offered: W15, 17

Instructor: Debra Davidson (2015) [ddavidso@ualberta.ca](mailto:ddavidso@ualberta.ca)

Rational: recommended by Tonia Harris. Course focuses on studying environmental and ecological issues through social movements.

## **R SOC 560 - Perspectives on Traditional Knowledge**

Traditional Knowledge is recognized as integral to environmental sustainability and the social and cultural well-being of indigenous peoples. The course focuses on the development of Traditional Knowledge as a field of inquiry and policy debate in Canadian society. Critical attention to the history, politics and theory behind its definition, classification and use will provide students with perspectives on its importance in addressing emergent issues of environmental change.

Offered: F15

Instructor: Brenda Parlee [bparlee@ualberta.ca](mailto:bparlee@ualberta.ca)

Rational: recommended by Tonia Harris

Cross listed

Renewable Resources (REN R):

## **REN R 260 - History and Fundamentals of Environmental Protection and Conservation**

A philosophical and sociological exploration of historical and contemporary perspectives on human-environmental relationships and their implications. Explores these perspectives in a framework of critical thinking and through case studies.

Offered: F14, W15 (2), F15, W16 (2), F16, W17 (2)

Instructor: Rick Pelletier [rickp@ualberta.ca](mailto:ricken@ualberta.ca)

Rational: focus of the course is on History and Fundamentals of Environmental Protection and Conservation

## **REN R 271 - The Politics of Food and Natural Resources**

Students will gain a sociological understanding of contemporary Canadian politics in the food and natural resources sectors. Examination of the nature of political organizations and policymaking in Canada; the particular roles played by the state, the "public," and certain sectors of civil society, including social movements, industry organizations, labor unions, scientific organizations, and rural and aboriginal peoples. Contemporary case studies may include climate change and energy dependence, genetic engineering in agribusiness, the organic food products movement, mining in the circumpolar north, forestry expansion in the boreal region and cod management in the Atlantic fisheries.

Offered: W15, 16, 17

Instructor: Mamta Vardhan [vardhan@ualberta.ca](mailto:vardhan@ualberta.ca)

Rational: course focuses on contemporary issues from the perspective of environmental sustainability, for examples the case studies examined in class

## **REN R 307 - Environmental Assessment Principles and Methods**

Principles and elements of environmental assessment with an interdisciplinary focus. Topics include types of environmental assessments, when to use them, data required, sampling strategies, how data should be collected and analyzed and ultimately communicated to pass legal and scientific scrutiny.

Offered: W15 (2), 16, 17 (2)

Instructor: Dr. David Olefeldt [olefeldt@ualberta.ca](mailto:olefeldt@ualberta.ca)

Rational: course focuses on Environmental Assessment, a principal policy tool used to address the environmental and social aspects of development.

## **REN R 360 - Soil and Water Conservation**

Global soil and water resources and their current rates of degradation. The main processes of degradation (erosion, loss of organic matter, salinization, pollution) and their causes. Consequences of degradation and conservation of resources through improved land use practices.

Offered: W15, 16, 17

Instructor: Dr. William Shotyk [shotyk@ualberta.ca](mailto:shotyk@ualberta.ca)

Rational: focus of course is on conservation of soil and water resources. Considered an elective course for the Certificate in Sustainability.

## **REN R 450 - Environmentally Sustainable Agriculture**

Land-management issues that influence the sustainability of both agriculture and the land resource. Role of ecological processes in determining sustainability and the development and adoption of practices that facilitate long-term viability of both agriculture and biophysical resources. The concept of the agro-ecosystem and application of ecological principles to agricultural land management. Use of environmental indicators to measure and predict long-term sustainability of agricultural land management.

Offered: W15, 16, 17

Instructor: Guillermo Hernandez Ramirez [ghernand@ualberta.ca](mailto:ghernand@ualberta.ca)

Rational: [Syllabus](#), recommended by Jillian Pratt

## **REN R 462 - Protected Areas Planning and Management**

Principles and practices of planning and management of protected areas, including national and provincial parks and forest recreational systems; wilderness management; the integration of biological and sociological criteria in protected areas planning and management.

Offered: F14, 15, 16

Instructor: John Acorn [jacorn@ualberta.ca](mailto:jacorn@ualberta.ca)

Rational: [Syllabus](#) (2013), recommended by Jillian Pratt as having aspects of “Environmental Health, Social Wellbeing”. Course focuses on protected areas.

## **REN R 464 - Conservation and Management of Endangered Species**

Theoretical and applied considerations for maintaining endangered, threatened and rare populations and species, including provincial, national and international strategies. Contributory factors to decline and extinction are discussed, as are various recovery programs.

Offered: F14, 15, 16

Instructor: Dr. Rene Belland [rbelland@ualberta.ca](mailto:rbelland@ualberta.ca)

Rational: [Syllabus](#), focus of course is preserving endangered species and natural diversity

## **REN R 465 - Environmental and Conservation Field Studies**

Field trip studies with a focus on environmental and conservation biology topics. Course content and offerings vary from year to year, and have included study trips on Northern Ecosystems, National Parks, and Protected Areas, Arctic Tundra, the Florida Everglades, and Galapagos Islands.

Offered: W15, 16, 17

Instructor: TBD

Rational: course focuses on “environmental and conservation biology topics”

## **REN R 466 - Climate Change and the North**

Current and projected impacts of climate change on the circumpolar north, including the land, its biota, northern communities, and drivers that shape these interactions.

Offered: W15, 16, 17

Instructor: Kathryn Aitken [kaitken@ualberta.ca](mailto:kaitken@ualberta.ca)

Rational: whole course looks at climate change effects on Northern Environments and people

## **REN R 473 - Northern Resource Management**

In-depth analysis of topical issues in northern resource management, including both ecological and socio-political dimensions, and emphasizing underlying scientific principles and adaptive management strategies.

Offered: F14, 16

Instructor: Dr. Fiona Schmiegelow [fschmie@ualberta.ca](mailto:fschmie@ualberta.ca)

Rational: ecological and socio-political ramifications of northern resource development have sustainability implications. Underlying scientific principles and management strategies reinforce goal of understanding sustainability implications.

## **REN R 474 - Utilization of Wildlife Resources**

Issues, principles and science surrounding sustainable use of wildlife resources. Hunting, angling and trapping for subsistence, recreational and commercial purposes. Sociopolitical dimensions of harvest regulation, wildlife administration, and human demographic changes. Field trips.

Offered F14, 15, 16

Instructor: Andrea McGregor [amm15@ualberta.ca](mailto:amm15@ualberta.ca)

Rational: [Syllabus](#), recommended by Jillian Pratt, focus of the course is on sustainable use of wildlife resources.

## **REN R 482 - Soil Remediation**

Principles and methods of biological, chemical, and physical remediation of soils contaminated by hazardous chemicals and other pollutants. Topics include bioremediation of hydrocarbon contaminated soils; chemical restoration of heavy metal polluted soils, acid soils and mine spoils, and salt-affected soils; physical and biological restoration of compacted soils and hydrophobic soils contaminated with organic compounds or wastes; and risk analysis and soil quality criteria in soil remediation.

Offered: F14, 15, 16

Instructor: Tariq Siddique [tariqs@ualberta.ca](mailto:tariqs@ualberta.ca)

Rational: [Syllabus](#). Soil remediation is an important process in land reclamation, important to improve the sustainability of sites

## **REN R 483 - Waste Management and Utilization**

Chemical, biological, and physical properties of anthropogenic wastes, their reactions in the soil environment, theory and practice for their chemical and biological immobilization and use in agriculture, forest, and urban lands.

Offered: W15, 16, 17

Instructor: Mark Teshima [mteshima@ualberta.ca](mailto:mteshima@ualberta.ca)

Rational: [Syllabus](#). Field of waste management is a core sustainability field

## **REN R 491 - Land-use Planning in Canada's North**

Contemporary approaches to land-use planning applied to northern systems in Canada, addressing the integration of social, environmental and economic values, and maintenance of ecosystem integrity through proactive measures.

Offered: W15, 16, 17

Instructor: Dr. Fiona Schmiegelow [fschmieg@ualberta.ca](mailto:fschmieg@ualberta.ca)

Rational: course takes a broad view to sustainable land-use planning in Northern Canada by looking at social, environmental, and economic values.

## **REN R 495 - Land Reclamation**

Principles, practices, and philosophy of reclamation of degraded lands. Topics include types of land disturbances and regulations governing their reclamation, landscape development, site preparation, soil reclamation and remediation, revegetation, seed mix design, planting methods, plant species selection, monitoring, determining success, plant community ecology and change, bioengineering, phytoremediation, vegetative reclamation, and ecological restoration.

Offered: W15, 16, 17

Instructor: Dr. Anne Neath [anaeth@ualberta.ca](mailto:anaeth@ualberta.ca)

Rational: recommended by Jillian Pratt as having aspects of “Environmental Health, Social Wellbeing, Economic Prosperity”

## **REN R 496 - Conservation Planning**

Conservation Planning is a quantitative, inter-disciplinary applied science that prioritizes conservation actions in a spatially-explicit manner. It seeks to understand trade-offs between biological, social and economic factors associated with land use activities. The course is a combination of computing labs that demonstrate key principles and software, lectures to discuss key issues, and a student-led final project to apply key concepts and quantitative techniques. Special emphasis is given to Alberta's land use planning challenges, although North American examples and exercises are also used.

Offered: W15, 16 17

Instructor: Scott Nielson [scottn@ualberta.ca](mailto:scottn@ualberta.ca)

Rational: Course addresses sustainability from a multifaceted angle by examining the “biological, social and economic factors associated with land use activities”; the focus of the course is on planning and conservation.



## **REN R 710 - Environmental Assessment Principles and Methods**

Principles and elements of environmental assessment with an interdisciplinary focus. Topics include types of environmental assessments, when to use them, data required, sampling strategies, how data should be collected and analyzed and ultimately communicated to pass legal and scientific scrutiny.

Offered: W15, 16, 17

Instructor: Dr. David Olefeldt [olefeldt@ualberta.ca](mailto:olefeldt@ualberta.ca)

Rational: course focuses on EA, a principal tool used in sustainable development practices

## **REN R 752 - Environmentally Sustainable Agriculture**

Land-management issues that influence the sustainability of both agriculture and the land resource. Role of ecological processes in determining sustainability and the development and adoption of practices that facilitate long-term viability of both agriculture and biophysical resources. The concept of the agroecosystem and application of ecological principles to agricultural land management. Use of environmental indicators to measure and predict long-term sustainability of agricultural land management.

Offered: W15, 16, 17

Instructor: Guillermo Hernandez Ramirez [ghernand@ualberta.ca](mailto:ghernand@ualberta.ca)

Rational: [Syllabus](#), recommended by Tonia Harris.

## **REN R 765 - Principles of Managing Natural Diversity**

Introduction to the theoretical foundation for conservation science. Elements of population, community and landscape ecology will be reviewed, and their application to real-world challenges discussed. Objective is to provide students with the scientific tools to evaluate and develop conservation strategies for maintaining diversity in human-altered systems. Ethical and philosophical aspects of the sociopolitical arena in which conservation decisions are made and implemented are also explored.

Offered: W15, 16, 17

Instructor: John Spence [jspence@ualberta.ca](mailto:jspence@ualberta.ca)

Rational: recommended by Tonia Harris as the course focuses on the theoretical foundations of conservation science.

## **REN R 766 - Protected Areas Planning and Management**

Principles and practices of planning and management of protected areas, including national and provincial parks and forest recreational systems; wilderness management; the integration of biological and sociological criteria in protected areas planning and management.

Offered: F14, 15, 16

Instructor: John Acorn [jacorn@ualberta.ca](mailto:jacorn@ualberta.ca)

Rational: course focuses on aspects of the management of protected areas, including “biological and sociological criteria”

## **REN R 770 - Utilization of Wildlife Resources**

Issues, principles and science surrounding sustainable use of wildlife resources. Hunting, angling and trapping for subsistence, recreational and commercial purposes. Sociopolitical dimensions of harvest regulation, wildlife administration, and human demographic changes. Field trips. Requires payment of additional student instructional support fees. Refer to the Fees Payment Guide in the University Regulations and Information for Students section of the Calendar.

Offered: F14. 15. 16

Instructor: Andrea McGregor [amm15@ualberta.ca](mailto:amm15@ualberta.ca)

Rational: recommended by Tonia Harris, focus of the class is on “sustainable use of wildlife resources”

## **REN R 796 - Conservation Planning**

Conservation Planning is a quantitative, inter-disciplinary applied science that prioritizes conservation actions in a spatially-explicit manner. It seeks to understand trade-offs between biological, social and economic factors associated with land use activities. The course is a combination of computing labs that demonstrate key principles and software, lectures to discuss key issues, and a student-led final project to apply key concepts and quantitative techniques. Special emphasis is given to Alberta's land use planning challenges, although North American

examples and exercises are also used.

Offered: W15, 16, 17

Instructor: Scott Nielson [scottn@ualberta.ca](mailto:scottn@ualberta.ca)

Rational: Course addresses sustainability from a multifaceted angle by examining the “biological, social and economic factors associated with land use activities”; the focus of the course is on planning and conservation.

## Faculty of Agriculture, Life, and Environmental Sciences- Courses that include Sustainability:

Agricultural, Food, and Nutritional Sciences (AFNS):

### **AFNS 416 - One Health**

'One Health' is an emerging paradigm in public and veterinary health which recognizes that human, animal and environmental health are interlinked. The course will address food and water safety, the increase in prevalence of antibiotic resistant organisms, emerging infectious zoonotic diseases, environmental protection and environmental sustainability, emphasizing the interaction of these diverse yet interconnected disciplines in protecting the health of populations. Graduate students may not register for credit (see AFNS 516). Joint offered with School of Public Health as SPH 516

Offered: W15, 16, 17

Instructor: Dr. Judd Aiken [judd.aiken@ualberta.ca](mailto:judd.aiken@ualberta.ca)

Rational: [Syllabus](#), Put forwards by Jillian Pratt, this course is takes an intersectional approach to human, animal and environmental health which is a foundational component of sustainability. Considered an elective course for the Certificate in Sustainability.

**Cross-listed with School of Public Health as SPH 516**

## AFNS 510 - Renewable Biomaterials

Fundamentals in bio-based materials development, characterization, and applications. Sources and classification of biomaterials, synthesis of renewable polymeric biomaterials, their characterization using different techniques, and industrial applications will be discussed.

Offered: W15, 16, 17

Instructor: Dr. Aman Ullah [ullah2@ualberta.ca](mailto:ullah2@ualberta.ca)

Rational: [Syllabus](#) (2015). Put forwards by Tonia Harris. Components of the course deal with renewable bio-materials and implications of bio-materials for various industries.

## AFNS 516 - One Health

'One Health' is an emerging paradigm in public and veterinary health which recognizes that human, animal and environmental health are interlinked. The course will address food and water safety, the increase in prevalence of antibiotic resistant organisms, emerging infectious zoonotic diseases, environmental protection and environmental sustainability, emphasizing the interaction of these diverse yet interconnected disciplines in protecting the health of populations. Lectures and labs are the same as for AFNS 416, but with additional assignments and evaluation appropriate to graduate studies. Credit will only be given for one of AFNS 416, 516 or SPH 416, 516.

Offered: W15, 16, 17

Instructor (W17): Judd Aiken [jmaiken@ualberta.ca](mailto:jmaiken@ualberta.ca)

Rational: [Syllabus](#). Put forwards by Tonia Harris, this course is takes an intersectional approach to human, animal and environmental health which is a foundational component of sustainability.

Cross listed

## AFNS 552 - Nutrition in the Prevention of Chronic Human Diseases

A lecture and reading course for graduate students to review current research and the scientific basis of nutrition intervention in the prevention and treatment of chronic human disease. Translation of research findings to nutrition recommendations in topical areas including global health and food supply, obesity, cardiovascular disease, polycystic ovary syndrome and behavior-cognitive disorders. Lectures are the same as for NUTR 452, but with additional assignments and evaluation appropriate to graduate studies. Credit will only be given for one of AFNS 552 and

NUTR 452.

Offered: W15, 16, 17

Instructor: Dr. Donna Vine [dvine@ualberta.ca](mailto:dvine@ualberta.ca)

Rational: [Syllabus](#). Recommended by Tonia Harris, role of nutrition in preventing chronic disease and ensuring wellness, touching on aspects of global health and food supply.

## **AFNS 568 - Clinical Nutrition**

Basic principles of nutrition in clinical situations. The role of diet in the management of various diseases. The laboratory sessions include practical experience in providing individualized nutritional care for clients from various cultural backgrounds. Lectures and labs are the same as for NUTR 468, with additional assignments and evaluation appropriate to graduate studies. Credit will only be given for one of AFNS 568, NUTR 468 and NU FS 468.

Offered: F14, 15, 16

Instructor: Dr. Diane Mager [mager@ualberta.ca](mailto:mager@ualberta.ca)

Rational: [Syllabus](#), the practice of individualizing nutritional recommendations to individuals of various cultural backgrounds has implications for sustainability.

## **AFNS 572 - Practical Case Studies in Rangeland Management and Conservation**

Cumulative effects of fire, grazing, browsing, and improvement practices on the productivity and species composition of range and pasture ecosystems, including management implications. Extended field trip prior to the start of classes. Lectures and labs are the same as for ENCS 471, but with additional assignments and evaluation appropriate to graduate studies.

Offered: F15

Instructor: Dr. Edward Bork [ebork@ualberta.ca](mailto:ebork@ualberta.ca)

Rational: [Syllabus](#) (2013). Put forwards by Tonia Harris.

**Cross-listed**

## **AFNS 577 - Advanced Community Nutrition**

Examination of nutrition problems in contemporary communities that relate to health promotion, food security, policy, program planning and community nutrition throughout the life cycle. Discussion of nutrition programs and resources. Students will develop the skills to write a community grant application. Lectures and labs are the same as for NUTR 477, with additional assignments and evaluation appropriate to graduate studies.

Offered: F14, F15, 16

Instructor: Dr. Anna Farmer [farmer1@ualberta.ca](mailto:farmer1@ualberta.ca)

Rational: [Syllabus](#), recommended by Tonia Harris as related

Cross-listed

Animal Science (AN SC):

## **AN SC 100 - Introduction to Animal Health Science**

An orientation to current issues and challenges related to animal health and disease in a global context. An interdisciplinary overview of the role and importance of animal health in modern society and its relationship to agriculture, food safety and human health. Causes of disease and the principles of maintaining healthy animals. The history and development of animal health professions and their roles.

Offered: F14, 15, 16

Professor: Dr. Craig Wilkinson [craig.wilkinson@ualberta.ca](mailto:craig.wilkinson@ualberta.ca)

Rational: From [syllabus](#), certain course objectives include: "Develop an understanding of and diseases shared by animals and people, including emerging diseases, and the concepts of One Health and Ecohealth" and "Discuss and explain some social, economic and other issues related to regional and international trade in animals and animal products" which impact:

- 2.) Natural limits and ecosystem maintenance
- 4.) Agriculture productivity

## **AN SC 376 - Animal Welfare**

An overview of animal welfare as it relates to both food and companion animals. Discussion of the scientific and ethical components that underlie our evaluation of the quality of life that animals

experience.

Offered: W15, F15, F16

Professor: Dr. Graham Plastow [plastow@ualberta.ca](mailto:plastow@ualberta.ca)

Rational: [Syllabus](#), many people would consider the issue of animal ethics a sustainability issue

## Agriculture and Resource Economics (AREC):

### **AREC 200 - Current Economic Issues for Agriculture and Food**

Applications of economic principles to problems and current issues relating to agriculture, food and the environment.

Offered: W15, 16, 17

Professor: Scott Jeffrey [scott.jeffrey@ualberta.ca](mailto:scott.jeffrey@ualberta.ca)

Rational: According to [syllabus](#): "Areas of study include business management decisions, marketing and demand analysis, and trade, government intervention in agriculture, and natural resource and environmental issues." Considered elective course for the Certificate in Sustainability

### **AREC 250 - Social and Economic Issues of Food Biotechnology**

This course will provide an introduction to the economics and business concepts in the biotechnology industry with an emphasis on food produced using genetic modification and other food technologies. The basic science behind GM foods will be discussed, but most of the material will focus on the social, economic, environmental, and legal issues surrounding GM foods. Key questions will be addressed using peer-reviewed literature and case studies, and the material will be presented from various disciplinary viewpoints.

Offered: W16, 17

Instructor: Dr. Henry An [henry4@ualberta.ca](mailto:henry4@ualberta.ca)

Rational: recommended by Jillian Pratt as touching on "Environmental Health, Social Well Being, and Economic Prosperity". The course description mentions environmental effects

## **AREC 313 - Statistical Analysis**

Analysis of economic data relating to renewable resource sectors including agriculture, food, forestry, and the environment; collection of data, sampling methods, tests of hypotheses, index numbers, analysis of variance, regression, and correlation; time series analysis. Prerequisite: Introductory statistics course.

Offered: F14, 15, 16

Instructor: Dr. Sandeep Mohapatra [smohapat@ualberta.ca](mailto:smohapat@ualberta.ca)

Rational: course focused on using economic data and statistics on renewable resources, with sustainability connotations.

## **AREC 323 - Introduction to Management for Agri-Food, Environmental, and Forestry Businesses**

Principles and practical aspects of business management, and their relevance to the managing businesses involved in a variety of industries, including agriculture, environment, food, and forestry. Topics include business planning and organizing, and issues related to the management of financial, physical, and human resources.

Offered: F14, W15, F15, W16, F16, W17

Instructor: Dr. Mohammad Torshizi [torshizi@ualberta.ca](mailto:torshizi@ualberta.ca)

Rational: part of the course focuses on the management of businesses in the environmental industry

## **AREC 333 - Economics of Production and Resource Management**

Application of economic concepts and introduction of management tools related to production decision-making for resource-based businesses. Integration of biophysical and environmental relationships with economic objectives in allocating resources. Introduction to quantitative tools used in applied production management decision-making.

Offered: F14, 15, 16

Instructor: Dr. Pearce Shewchuk [shewchuk@ualberta.ca](mailto:shewchuk@ualberta.ca)



Rational: course description mentions integration of environmental relationships with economic objectives

## **AREC 375 - World Food and Agriculture**

Economic issues in international agriculture including the world food problem, agricultural development; agricultural and food trade and policy and selected agricultural biotechnology issues. Selected international applications and issues are stressed.

Offered: W15, 16, 17

Instructor: Brent Swallow [bswallow@ualberta.ca](mailto:bswallow@ualberta.ca)

Rational: Recommended by Jillian Pratt as touching on “Environmental Health, Economic Prosperity”. I’ve taken this course before and it touches on issues of climate change, agricultural practices, and food security. As well as international trade. Considered an elective course for the Certificate in Sustainability.

## **AREC 384 - Food Market Analysis**

Applications of price and market theories to marketing problems and issues for food and agricultural products. Topics include: market structures and marketing functions; price analysis; futures markets; economics of food safety and quality; and international food marketing.

Offered: F14, 15, 16

Instructor: Dr. Henry An [henry4@ualberta.ca](mailto:henry4@ualberta.ca)

Rational: recommended by Jillian Pratt as touching on “Social Wellbeing, Economic Prosperity”

## **AREC 410 - Advanced Methods and Applications in Applied Economics**

Empirical applications of methods used in resource, environmental, agri-food, and forest economics. Involves one or more case study projects that focus on the empirical examination of economic issues in renewable resource management.

Offered: W15, 16, 17

Instructor: Marty Luckert [mluckert@ualberta.ca](mailto:mluckert@ualberta.ca)

Rational: course focuses on applying economic theory to a variety of renewable resource management issues, with a partial focus on the environment

## **AREC 423 - Advanced Management Methods and Applications for Agri-Food, Environmental and Forestry Businesses**

Empirical applications of management and research methods used by business managers. Emphasis is given to integrating economic and business management concepts with applications to problems and issues in agriculture, food, the environment and forestry.

Offered: W15, 16, 17

Instructor: Dr. Mohammad Torshizi [torshizi@ualberta.ca](mailto:torshizi@ualberta.ca)

Rational: Recommended by Jillian Pratt as touching on “Economic Prosperity, Environmental Health”

## **AREC 430 - Economic Impact Assessment**

Examination of the theory and application of economic assessment methods with a focus on the evaluation of environmental, agricultural and natural resource projects, regulatory policy, and planning. Includes case studies of recent project and policy proposals to illustrate the methods used to evaluate economic benefits and costs of such proposals. Applications to estimating private economic benefits.

Offered: W15, 16, 17

Instructor: Maik Kecinski [kecinski@ualberta.ca](mailto:kecinski@ualberta.ca)

Rational: economic impact assessment includes evaluation of environmental resources which impacts sustainability and guides sustainable development

## **AREC 473 - Food and Agricultural Policies**

Economics of public policy for agriculture and food industries. Public choice principles and

institutions. Farm and food policy in Canada and selected countries. Case studies on price and output policy; agricultural trade; food safety and quality; resource use and environmental sustainability; and/or rural change/restructuring.

Offered: F14, 15, 16

Instructor: James Rude [jrude@ualberta.ca](mailto:jrude@ualberta.ca)

Rational: [Syllabus](#). Recommended by Jillian Pratt

## **AREC 485 - Trade and Globalization in Food and Resources**

Principles and policies affecting international trade in food, forestry and natural resources. Current issues in trade, including fair trade concerns, trade in capital and services, effects of food safety and quality standards, and environmental issues surrounding trade agreements and institutions.

Offered: F14, 15

Instructor: Ellen Goddard [egoddard@ualberta.ca](mailto:egoddard@ualberta.ca)

Rational: course description mentions environmental issues surrounding trade agreements and institutions. Considered a focused course in STARS 2014

## **AREC 530 - Economic Impact Assessment**

Examination of the theory and application of economic assessment methods with a focus on the evaluation of environmental, agricultural and natural resource projects, regulatory policy, and planning. Includes case studies of recent project and policy proposals to illustrate the methods used to evaluate economic benefits and costs of such proposals. Applications to estimating private economic benefits.

Offered: W15, 16, 17

Instructor: Maik Kecinski [kecinski@ualberta.ca](mailto:kecinski@ualberta.ca)

Rational: economic evaluation of environmental factors is an important consideration in sustainable development.

## **AREC 575 - Agriculture in Developing Countries**

Role of agriculture in the economic growth of developing countries; influence of international trade and commodity agreements on economic development.

Offered: W15, 16, 17

Instructor: Dr. Sandeep Mohapatra [smohapat@ualberta.ca](mailto:smohapat@ualberta.ca)

Rational: [Syllabus](#), the study of the influence of international trade and agriculture on the economic growth of developing countries is important for social sustainability

Environmental and Conservation Sciences (ENCS):

## **ENCS 356 - Principles of Rangeland Conservation and Habitat Management**

An introduction to rangeland conservation and wildlife habitat management. Examines the effects of grazing and browsing on ecosystems components, including rangeland soils, plants, plant communities, and landscapes. Discusses interactions among herbivores including livestock and wildlife. Reviews practical management activities such as rangeland inventory, improvements, planning, and condition assessment.

Offered: F14, 15, 16

Instructor: Dr. Cameron Carlyle [carlyle1@ualberta.ca](mailto:carlyle1@ualberta.ca)

Rational: Course discusses the principles of conservation of land, considered an elective course for the Certificate in Sustainability

## **ENCS 406 - Rangeland Plant Communities of Western Canada**

Examines major rangeland plant communities and their physical environments in western Canada, including individual plant identification and ecology. Includes a review of various land uses such as livestock and wildlife grazing within these communities, their response to disturbances such as herbivory and fire, and other management considerations.

Offered: W15, 16, 17

Instructor: Dr. Edward Bork [ebork@ualberta.ca](mailto:ebork@ualberta.ca)

Rational: recommended by Jillian Pratt as touching on “environmental health”

## **ENCS 407 - Rangeland Plant Communities of North America**

An in-depth study of the plants and communities of North American rangelands and wildland ecosystems, and their management.

Offered: F14, 15, 16

Instructor: Dr. Barry Irving [birving@ualberta.ca](mailto:birving@ualberta.ca)

Rational: recommended by Jillian Pratt as touching on “environmental health”

## **ENCS 471 - Practical Case Studies in Rangeland Management and Conservation**

Cumulative effects of fire, grazing, browsing, and improvement practices on the productivity and species composition of range and pasture ecosystems, including management implications. Extended field trip prior to the start of classes. [Agricultural, Food and Nutritional Science]

Offered: F15

Instructor: Dr. Edward Bork [ebork@ualberta.ca](mailto:ebork@ualberta.ca)

Rational: **I have syllabus saved, you can find it by googling it.** Course relates to how to manage rangelands in a sustainable way, but more for profit and continued grazing. Tonia Harris listed this as a sustainability course for grad students

**Cross-listed**

Forest Economics (FOREC):

## **FOREC 473 - Forest Policy**

Analysis of forest resource policy formulation and evaluation. Review of selected policies and programs provincially, nationally, and internationally. Analysis of current policy issues.

Offered: F14, 15, 16

Instructor: Marty Luckert [mluckert@ualberta.ca](mailto:mluckert@ualberta.ca)

Rational: From [syllabus](#): course objectives include “public and social choice” “anthropocentric and ecocentric policy”, “Deforestation. How serious is tropical deforestation? Causes and effects of deforestation; policy options for reducing deforestation”, “Carbon Sequestration. Canada and the Kyoto Protocols. The role of forests in Sequestering Carbon. Forestry options for reducing carbon emissions.”

Human Ecology (HECOL):

## **HECOL 100 - Introduction to Principles and Practice in Human Ecology**

An introductory course that provides a foundation in the body of knowledge that constitutes the field of human ecology. The history, philosophy, theoretical approaches and scope of the field are explored and skills that foster effective professional practice are discussed.

Offered: F14, 15, 16

Instructor: Sherry Ann Chapman [sherryc@ualberta.ca](mailto:sherryc@ualberta.ca)

Rational: [Syllabus](#), core course for Certificate in Sustainability.

## **HECOL 201 - Material Culture**

The study of a range of objects within selected time periods and environments, and the study of particular perspectives through which objects can be interpreted. Students are encouraged to understand the connection between personal, social, temporal, and cultural contexts and the objects that contribute to these contexts.

Offered: F14, 15, 16

Instructor: Dr. Arlene Oak [aoak@ualberta.ca](mailto:aoak@ualberta.ca)

Rational: [Syllabus](#). Course objectives include looking into “material culture”, “consumption”, trade and how we express and interact with culture through materials.

## HECOL 241 - Fashion Industries

An introduction to the soft goods industry including an overview of the apparel sector, apparel production, channels of distribution, fashion oriented products, global competitive influences, and career opportunities.

Offered: F14, 15, 16

Instructor: Lori Moran [lmoran@ualberta.ca](mailto:lmoran@ualberta.ca)

Rational: From [syllabus](#): course topic includes “sustainability in the fashion chain, what’s the true cost?”

## HECOL 315 - Interviewing and Counseling

An introduction to interviewing and counseling strategies for working with individuals using a strengths-based, human ecological approach.

Offered: F14, 15, 16

Instructor: Dr. Karen Cook [kcook@ualberta.ca](mailto:kcook@ualberta.ca)

Rational: From [syllabus](#): a focus of the course is to “develop sensitivity to issues of diversity (e.g., culture, race, class, gender, sexual orientation, age, trauma, and disability) when working in a helping role” which has implications for social sustainability

## HECOL 360 - Dress and Culture

The complex phenomenon of bodily adornment is explored in relationship to values, attitudes, activities, beliefs, and forms of knowledge. Clothing is considered in terms of how it is expressive of various aspects of culture. Students develop analytical skills to help them understand the role played by clothing in different times, places, and contexts.

Offered: W15, 16, 17

Instructor: Dr. Arlene Oak [aoak@ualberta.ca](mailto:aoak@ualberta.ca)

Rational: From [syllabus](#): focus of the course includes gender/religious/culture identity expression through dress, implications for social sustainability.

## HECOL 440 - Family Policy Issues

Analysis of current policy issues faced by Canadian families and the examination of policies and programs affecting family well-being and relationships.

Offered: W15, 16, 17

Instructor: Dr. Rhonda Breitreuz [rhondab@ualberta.ca](mailto:rhondab@ualberta.ca)

Rational: [Syllabus](#). Course touches on aspects of income inequality, poverty relief, and other social justice issues.

## HECOL 441 - Textiles and Apparel in the Global Economy

Production and distribution of textiles and apparel in a global context; issues and policy related to international trade agreements; impact of national and international consumer, labor and environmental standards.

Offered: W16, 17

Instructor: Lori Moran [lmoran@ualberta.ca](mailto:lmoran@ualberta.ca)

Rational: From [syllabus](#): course content includes “Environmental Issues Understanding Sustainability Issues – consumer responses?” as well as issues of globalization, women in the textile workforce, supply chains, and global trade. Considered an elective course for the Certificate in Sustainability

## HECOL 462 - Material Culture in Home and Community

Framed within the context of theories in human ecology, this course investigates material culture ranging from individual artifacts to community, including local and global environments. The roles and effects of material culture on individual, familial and community living are explored through literature, artifacts and life-stories. These issues are examined through a combination of seminars and group work culminating in an exhibit.

Offered: W16

Instructor: Julie Petrov [jpetrov@ualberta.ca](mailto:jpetrov@ualberta.ca)

Rational: From [syllabus](#): course focus includes “the roles and effects of material culture on individual, family, and community living”. Implications for social sustainability and cultural vitality.



Included last time.

Nutrition and Food Sciences (NU FS):

## **NU FS 223 - The Cultural Ecology of Food and Health**

Contemporary dietary patterns, including how food choices are shaped by cultural, social, and economic spheres. The roles of culture and religion as determinants of healthy eating will be highlighted.

Offered: W15, 16 17

Instructor: Dr. Noreen Willows [nwillows@ualberta.ca](mailto:nwillows@ualberta.ca)

Rational: From [syllabus](#), course content includes “Contemporary dietary patterns, including how food choices are shaped by cultural, social, and economic spheres. The roles of culture and religion as determinants of healthy eating will be highlighted.” Course discusses the intersection of culture, ethnicity, gender, and healthy food

Nutrition (NUTR):

## **NUTR 100 - Nutrition and Wellbeing**

Principles of nutrition. The need for and functions of the major nutrients for humans. Cannot be taken by students with credit or currently registered in NU FS 305 or other NUTR courses.

Offered: F14, W15, Sp15, F15, W16, Sp16, F16, W17

Instructor: Sabina Valentine [sparkes@ualberta.ca](mailto:sparkes@ualberta.ca)

Rational: From [syllabus](#), one unit of the course focuses on “world hunger and malnutrition”, overall course focuses on wellbeing.

## **NUTR 452 - Nutrition in the Prevention of Chronic Human Diseases**

A lecture and reading course to review current research and the scientific basis of nutrition

intervention in the prevention and treatment of chronic human disease. Translation of research findings to nutrition recommendations in topical areas including global health and food supply, obesity, cardiovascular disease, polycystic ovary syndrome and behavior-cognitive disorders. Graduate students may not register for credit (see AFNS 552).

Offered: W 15, 16, 17

Instructor: Dr. Donna Vine [dvine@ualberta.ca](mailto:dvine@ualberta.ca)

Rational: [Syllabus](#). Tonia Harris recommended AFNS 552 as related to sustainability and its cross listed

Cross listed as AFNS 552

## **NUTR 468 - Clinical Nutrition**

Basic principles of nutrition in clinical situations. The role of diet in the management of various diseases. The laboratory sessions include practical experience in providing individualized nutritional care for clients from various cultural backgrounds.

Offered: F14, 15, 16

Instructor: Dr. Diane Mager [mager@ualberta.ca](mailto:mager@ualberta.ca)

Rational: From [syllabus](#), course topics include “The principles of therapeutic diets and their application with consideration of socio-economical, cultural and psychological factors”

Cross listed as AFNS 568

Plant Science (PL SC):

## **PL SC 100 - Plants in our Lives**

Issues related to the importance of plants in our lives, including global food security, interactions between agriculture and the environment, the role of crops in human and animal nutrition, and the potential development of biofuels, biofibers, biopharmaceutical, and bioindustrial crops.

Offered: W15, 16, 17

Instructor: Dr. Linda Hall [lmhall@ualberta.ca](mailto:lmhall@ualberta.ca)

Rational: [Syllabus](#), from course description, course touches on aspects of food security, and interaction between agriculture and environment. Considered an elective course for the Certificate

in Sustainability and considered focused for STARS 2014

## **PL SC 324 - Crop Ecophysiology**

Study of crop production as influenced by plant-plant and plant-environment interactions, as well as management practices. Topics may include photosynthetic efficiency, growth analysis, competition and facilitation in monocrops and mixtures, response to climate change and environmental stress, use of genetically modified organisms and contrasting world crop production systems.

Offered: W16

Instructor: Dr. Dean Spaner [dspaner@ualberta.ca](mailto:dspaner@ualberta.ca)

Rational: From [syllabus](#), course discusses green revolution which was implicated in global food supply, and one unit that focuses on plant and ecosystem response to climate change.

## **PL SC 345 - Plants for Bioproducts**

Agronomy, breeding, biochemistry, biotechnology, and ecological issues related to production of plants for bioproducts. Topics selected from biodiesel, fuel ethanol, biolubricants, bioplastic, platform biochemicals, and starch and protein for nonfood applications.

Offered: W15, 16, 17

Instructor: Dr. Jocelyn Ozga [jozga@ualberta.ca](mailto:jozga@ualberta.ca)

Rational: [From Syllabus](#), a focus of the course is reducing environmental footprint of and through plant bioproducts. Recommended by Jillian Pratt as touching on “Environmental Health”

## **PL SC 352 - Invasive Alien Plants: Biology and Control**

Biology and ecology of invasive alien species in cropped, disturbed, and natural environments. Methods of control of weedy species, including biological, cultural, mechanical, and chemical and an introduction to the herbicide mechanism of action and environmental impacts.

Offered: W15, 16, 17

Instructor: Dr. Linda Hall [lmhall@ualberta.ca](mailto:lmhall@ualberta.ca)

Rational: from [syllabus](#), course looks into environmental effects of invasive species and methods of managing invasive species, such as herbicides. Recommended by Jillian Pratt as touching on “Environmental Health”

## PL SC 354 - Forage Crops

The establishment, management, conservation and utilization of forages. Morphological structure and adaptation of the principal forage grasses and legumes.

Offered: W15, 16, 17

Instructor: Darren Bruhjell [bruhjell@ualberta.ca](mailto:bruhjell@ualberta.ca)

Rational: [Syllabus](#). Course focuses on conservation of forage plant species. Recommended by Jillian Pratt as touching on “Economic Prosperity”

## PL SC 499 - Cropping Systems

The crop rotations, pest management, nutrient cycling, and **economic and ecological sustainability of specific Alberta cropping systems will be examined.** The lab will consist of a field tour in which students interact with researchers and agronomists from across Alberta. Classes will be a balance of lectures, integrating agronomic principles within the framework of Alberta cropping systems, and team project work. Field tour begins generally 5 days prior to the start of classes.

Offered: F14, 15, 16

Instructor: Dr. Dean Spaner [dspaner@ualberta.ca](mailto:dspaner@ualberta.ca)

Rational: Put forwards by Jillian Pratt. This course focuses on the factors influencing the sustainability of specific Alberta cropping systems.

Rural Sociology (R SOC):

## R SOC 555 - Natural Resource Sociology

Examines social problems and challenges in natural resource dependent regions. Covers social theories of development, public participation, social impacts, institutional arrangements, and social capacity for natural resource management and community development.

Offered: W16, 17

Instructor: Kevin Jones [kjones4@ualberta.ca](mailto:kjones4@ualberta.ca)

Rational: recommended by Tonia Harris

## Renewable Resources (REN R):

### **REN R 100 - Introduction to Forestry**

A general introduction to trees and other forest plants, forest ecology, and forest land-use planning. Includes discussions of the relationships between recreation, water, wildlife, agriculture, range and timber to forest management policies and practices in Alberta and elsewhere.

Offered: F14, 15, 16

Instructor: Vic Lieffers [lieffers@ualberta.ca](mailto:lieffers@ualberta.ca)

Rational: [Syllabus](#), one unit of the course focuses on “Wilderness Forests: the need for such preserves” and another discusses “Carbon in forests - can forests be our C source and storehouse”. Considered an elective course for the Certificate in Sustainability

### **REN R 205 - Wildlife Biodiversity and Ecology**

Introduction to animals in the context of conservation, interactions with people, and roles in natural ecosystems. Labs provide a survey of North American animal life, both vertebrate and invertebrate, with emphasis on recognition of higher taxa and on hierarchical classification.

Offered: F14, W15, F15, W16, F16, W17

Instructor: John Acorn [jacorn@ualberta.ca](mailto:jacorn@ualberta.ca)

Rational: [Syllabus](#), course mostly looks at measurement and field techniques, and animal taxonomy and morphology, but the course does examine these techniques through a lens of conservation. Considered an elective course for the Certificate in Sustainability

### **REN R 250 - Water Resource Management**

Global perspective of supply of and demand for water, basic hydrologic principles, concepts in

water management, human intervention in the hydrologic cycle, and environmental issues related to this intervention.

Offered: F14, 16

Instructor: Dr. Fiona Schmiegelow [fschmieg@ualberta.ca](mailto:fschmieg@ualberta.ca)

Rational: [Syllabus](#) (2013), course discusses human needs and usages of water, and environmental issues associated with human intervention in the hydrologic cycle.

## **REN R 299 - Environmental and Conservation Sciences and Forestry Field School**

Combines the concepts, theories and practices of environmental, conservation and forest sciences in an off-campus field experience. Field skill proficiency in planning, measurement, analysis and reporting is emphasized for biophysical and socioeconomic components of the environment.

Offered: Sp15, 16

Contact: Alex Drummond [alexdrum@ualberta.ca](mailto:alexdrum@ualberta.ca)

Rational: according to the course description this course touches on essential tools for environmental and conservation sciences, including an emphasis on socioeconomic impacts of the environment.

## **REN R 322 - Forest Ecosystems**

Analysis of the structure and function of forest ecosystems. Topics include physical processes, energy flow, productivity, carbon dynamics and credits, nutrient cycling, impacts of natural and anthropogenic disturbance, regeneration, succession, community composition, biodiversity, and ecosystem classification.

Offered: F14, 15, 16

Instructor: Dr. Ellen Macdonald [emacдона@ualberta.ca](mailto:emacдона@ualberta.ca)

Rational: from [Syllabus](#), course focuses on learning how to “manage forests for a diversity of values” which includes impacts on biodiversity and the “impacts of different management interventions and natural disturbances on forest structure and function”

## **REN R 323 - Silviculture**

Forest regeneration principles and techniques; stand tending including fertilization, thinning, pruning and drainage; harvesting systems for reforestation; nursery practices; reforestation, the law and current practices.

Offered: F14, 15, 16

Instructor: Philip Comeau [pcomeau@ualberta.ca](mailto:pcomeau@ualberta.ca)

Rational: From [syllabus](#), course looks at how silvicultural practices influence “non-timber resources and ecological services”, which has environmental implications for preservation of forest ecosystems, biodiversity, human land usage, and the carbon sequestration of forests.

## **REN R 327 - The Mosses of Alberta: Conservation and Identification**

This is an introduction to identification and conservation of the mosses of Alberta, with a strong emphasis on field identification. Students are introduced to the morphological characters used to identify Alberta mosses, with supplementary information about individual species' habitat affinities and distribution within Alberta. Lecture topics include basic morphology, conservation and management of species diversity, and rare/endangered species found within Alberta. Students learn to identify more than 110 species from the province's six major natural regions.

Offered: W15, 16, 17

Instructor: Dr. Rene Belland [rbelland@ualberta.ca](mailto:rbelland@ualberta.ca)

Rational: [Syllabus](#). From course description, course touches on conservation of moss habitat and management of species diversity

## **REN R 340 - Introduction to Fire Science and Management**

Fire thermophysics, combustion energetics, fire behavior, fuels measurement and manipulation, fire effects; prescribed burning and introduction of fire spread models. Applications of fire as part of sophisticated forest management.

Offered: W15, 16, 17

Instructor: Dr, Mike Flannagan [flanniga@ualberta.ca](mailto:flanniga@ualberta.ca)

Rational: From [syllabus](#), course asks students to “Recognize social, environmental and economic effects of policies and strategies that impact forest fire management” and looks at changing climate’s impact on forest fire management.

## **REN R 364 - Principles of Managing Natural Diversity**

Introduction to the theoretical foundation for conservation science. Elements of population, community and landscape ecology will be reviewed, and their application to real-world challenges discussed. Objective is to provide students with the scientific tools to evaluate and develop conservation strategies for maintaining diversity in human-altered systems. Ethical and philosophical aspects of the sociopolitical arena in which conservation decisions are made and implemented are also explored.

Offered: W15 (2), 16 (2), 17 (2)

Instructor: Kathryn Aitken [kaitken@ualberta.ca](mailto:kaitken@ualberta.ca)

Rational: recommended by Jillian Pratt as touching on “Environmental Health, Economics Prosperity”. Considered an elective course for the Certificate in Sustainability

## **REN R 365 - Ecology of Northern Landscapes**

A study of landscape properties - pattern, process and scale - and their relationship to broad-scale ecological and environmental issues in northern systems.

Offered: W15, 16, 17

Instructor: Dr. Fiona Schmiegelow [fschmieg@ualberta.ca](mailto:fschmieg@ualberta.ca)

Rational: course looks at environmental issues in northern ecological and social systems.

## **REN R 366 - Restoration Ecology**

Principles and practices of restoring ecosystem structure, function and biodiversity after natural or anthropogenic disturbances. The course focuses on ecological theory and how to apply it to ecological restoration. Topics include landscape processes and connectivity, soil-plant processes, techniques, philosophy and ethics and societal aspects of ecological restoration.



Offered: W15, 16, 17

Instructor: Dr. Justine Karst [karst@ualberta.ca](mailto:karst@ualberta.ca)

Rational: recommended by Jillian Pratt as touching on “Environmental Health”

## **REN R 376 - Fisheries and Wildlife Management**

Principles of ecology as applied to the management of fisheries and wildlife communities. Topics include the growth and regulation of populations, interactions among species and their environments, tools and techniques used to assess and manage fisheries and wildlife. Special emphasis will be placed applying knowledge using case studies and class exercises to demonstrate key principles.

Offered: F14, W15, W16, F16, W17

Instructor: Mark Poesch [poesch@ualberta.ca](mailto:poesch@ualberta.ca)

Rational: recommended by Jillian Pratt as touching on “Environmental Health, Economic Prosperity”. Considered an elective course for the Certificate in Sustainability

## **REN R 414 - Agroforestry Systems**

Principles, complexity, and diversity of agroforestry. Classification of agroforestry systems. Agroforestry systems in North America, specifically Canada. Plant and soil aspects of and interactions among the components in agroforestry systems. Use of agroforestry systems to enhance land productivity and sustainability. Socioeconomic aspects of agroforestry.

Offered: F15

Instructor: Dr. Scott Chang [sxchang@ualberta.ca](mailto:sxchang@ualberta.ca)

Rational: recommended by Jillian Pratt as touching on “Environmental Health”

## **REN R 423 - Advanced Silviculture**

Readings, discussions and exercises on current topics in silviculture. Possible topics include: forest microsites, forest competition, plantation forestry, partial-cut systems, or intensive management. Offered in alternate years.

Offered: W15, 17

Instructor: Dr. Victor Lieffers [lieffers@ualberta.ca](mailto:lieffers@ualberta.ca)

Rational: recommended by Jillian Pratt as touching on “Environmental Health”

## **REN R 440 - Disturbance Ecology Fundamentals**

This course will cover various aspects of disturbance ecology, including concepts of disturbance frequency, severity, intensity; ecological resilience and resistance and ecosystem responses to and recovery from disturbance. Students will define what a disturbance is and critically evaluate disturbance types and their characteristics in different ecosystems and their implications for conservation, sustainability of ecosystems, and application to reclamation / restoration.

Offered: F14, 15, 16

Instructor: Nadir Erbilgin [erbilgin@ualberta.ca](mailto:erbilgin@ualberta.ca)

Rational: recommended by Jillian Pratt as touching on “Environmental Health”

## **REN R 441 - Soil Formation and Landscape Processes**

Soil formation, with emphasis on landscape processes as factors in soil development; pedogenic processes and their relation to environmental issues; soils; vegetation, and geological associations; kinds and distribution of soils in Canada; soil classification; field examination and computer-assisted learning of soils and their landscape.

Offered: F14, 15, 16

Instructor: Miles Dyck [mdyck@ualberta.ca](mailto:mdyck@ualberta.ca)

Rational: recommended by Jillian Pratt as touching on “Environmental Health”

## **REN R 444 - Environmental Soil Chemistry**

Chemical processes in soil and related terrestrial environments and the consequences of these processes as they relate to soil productivity, environmental quality and pollution of soil and water. The course describes fundamental chemical concepts such as soil solution and solid phase chemistry, sorption phenomena, ion exchange, oxidation-reduction reactions and speciation of metals. These concepts are used to predict the fate (distribution, transport, bioavailability and

transformation) of inorganic and organic contaminants in soil. The chemical principles provide fundamental knowledge to develop soil reclamation strategies and nutrient management practices for enhanced crop production.

Offered: W15, 16, 17

Instructor: Tariq Siddique [tariqs@ualberta.ca](mailto:tariqs@ualberta.ca)

Rational: [Syllabus](#), course discusses soil contamination and transport of pollutants through soil. Recommended by Jillian Pratt as touching on “Environmental Health”

## **REN R 446 - Climates and Ecosystems**

The basic principles by which the cycles of water, carbon, and nutrients through soils, plants, and the atmosphere are controlled in terrestrial ecosystems under different climates. Interrelationships among water, carbon and nutrient cycles in natural and managed ecosystems that have developed in different climatic zones. Environmental consequences of human intervention in the cycles for food and fibre production in different ecosystems.

Offered: F14, 15, 16

Instructor: Dr. Robert Grant [rgrant@ualberta.ca](mailto:rgrant@ualberta.ca)

Rational: From course description course looks at “Environmental consequences of human intervention in the cycles for food and fibre production in different ecosystems.”

## **REN R 467 - Methods of Environmental Interpretation and Communication**

Methods of communicating environmentally relevant subject matter to a broad audience. Includes discussion of guided walks, in-person presentations, brochures, visitor centers, exhibits, signs, magazine articles, books, video production, media relations skills, websites and ecotourism.

Offered: W15, 16, 17

Instructor: John Acorn [jacorn@ualberta.ca](mailto:jacorn@ualberta.ca)

Rational: [Syllabus](#), course focuses on effectively interpreting issues of relevance to sustainability

## **REN R 468 - Management and Conservation of Genetic Resources**

Principles and issues in conserving and managing plant and animal genetic resources from the global perspective. Lectures will be supplemented with case studies.

Offered: W16

Instructor: Tyler Kuhn [tkuhn@ualberta.ca](mailto:tkuhn@ualberta.ca)

Rational: [Syllabus](#) (2013). Examines the principles of and conserving genetic diversity which has implications for environmental sustainability

## **REN R 595 - Advanced Land Reclamation**

An examination of current topics in land reclamation, ecological restoration, revegetation and remediation of degraded lands. Topics cover vegetation and soil responses to disturbance and development of reclaimed (eco)systems through anthropogenically mediated and natural recovery.

Offered: W15, 17

Instructor: Dr. Anne Naeth [anaeth@ualberta.ca](mailto:anaeth@ualberta.ca)

Rational: recommended by Tonia Harris, land reclamation is an essential process to ensure the environmental sustainability of reclaimed sites

## **REN R 721 - Forest Ecosystems**

Exploration of key concepts regarding the ecology of forest ecosystems at varying temporal and spatial scales. Emphasis will be on relationships between biotic and abiotic components of the ecosystem. Topics covered will include flows of energy and matter, ecosystem dynamics, forest landscapes and biodiversity, impacts of natural and anthropogenic disturbance, forest conservation and ecosystem management. Lab exercises during the first month are held outside. The course is taught using a blended learning approach and is available via remote delivery.

Offered: F14, 15, 16

Instructor: Dr. Ellen Macdonald [emacдона@ualberta.ca](mailto:emacдона@ualberta.ca)

Rational: course discusses topics related to forest conservation and ecosystem management.

## **REN R 727 - Forest Resources Management**

Analytical techniques used by renewable resource managers for management of wildland areas for single or multiple outputs; problems of defining optimality when confronted with competing uses and multiple outputs. Not available for students with credit in REN R 430.

Offered: F14, 15, 16

Instructor: Dr. Glen Armstrong

Rational: “competing uses and multiple outputs” in silviculture refers to environmental services provided by forests, course topics include analyzing forests as a renewable resource and managing wildland areas for multiple outputs.

## **REN R 732 - Disturbance Ecology**

This course will cover various aspects of disturbance ecology, including concepts of disturbance frequency, severity, intensity; ecological resilience and resistance and ecosystem responses to and recovery from disturbance. Students will define what a disturbance is and critically evaluate disturbance types and their characteristics in different ecosystems and their implications for conservation, sustainability of ecosystems, and application to reclamation / restoration.

Offered: F14, 15, 16

Instructor: Nadir Erbilgin [erbilgin@ualberta.ca](mailto:erbilgin@ualberta.ca)

Rational: recommended by Tonia Harris. Course touches on aspects of “conservation, sustainability of ecosystems, and application to reclamation / restoration”

## **REN R 741 - Soil Formation and Landscape Processes**

Soil formation, with emphasis on landscape processes as factors in soil development; pedogenic processes and their relation to environmental issues; soils; vegetation, and geological associations; kinds and distribution of soils in Canada; soil classification; field examination and computer-assisted learning of soils and their landscape. Field trips. Requires payment of additional student instructional support fees. Refer to the Fees Payment Guide in the University Regulations and Information for Students section of the Calendar. Not available for students with credit in REN R 441 or SOILS 420. Available only to students in MAg, MBA/MAg, MF, or MBA/MF, or by consent of Department.

Offered: F14, 15, 16

Instructor: Miles Dyck [mdyck@ualberta.ca](mailto:mdyck@ualberta.ca)

Rational: course discusses how pedogenic processes relate to environmental issues

## **REN R 744 - Soil Environmental Chemistry**

Chemical processes in soil and related terrestrial environments and the consequences of these processes as they relate to environmental quality and pollution of soil and water, nutrient levels, and mechanical stability or dispersion of clays and soils. The course describes fundamental chemical concepts such as soil solution speciation, precipitation/dissolution, and adsorption exchange and then uses the concepts in the examination and computer modelling of some current environmental, agricultural and engineering problems. The leachate chemistry of certain large volume industrial wastes is also examined in the course.

Offered: W15, 16, 17

Instructor: Tariq Siddique [tariqs@ualberta.ca](mailto:tariqs@ualberta.ca)

Rational: course examines relationship between soil and “environmental quality [and] pollution of soil and water”

## **REN R 746 - Climates and Ecosystems**

The basic principles by which the cycles of water, carbon, and nutrients through soils, plants, and the atmosphere are controlled in terrestrial ecosystems under different climates. Interrelationships among water, carbon and nutrient cycles in natural and managed ecosystems that have developed in different climatic zones. Environmental consequences of human intervention in the cycles for food and fibre production in different ecosystems.

Offered: F14, 15, 16

Instructor: Dr. Robert Grant [rgrant@ualberta.ca](mailto:rgrant@ualberta.ca)

Rational: Recommended by Tonia Harris. Course touches on aspects of “Environmental consequences of human intervention in the cycles for food and fibre production in different ecosystems”

**Cross-listed**

## **REN R 750 - Soil and Water Conservation**

Global soil and water resources and their current rates of degradation. The main processes of degradation (erosion, loss of organic matter, salinization, pollution) and their causes. Consequences of degradation and conservation of resources through improved land use practices.

Offered: W15, 16, 17

Instructor: William Shotyk [shotyk@ualberta.ca](mailto:shotyk@ualberta.ca)

Rational: recommended by Tonia Harris. Degradation of soil and water resources has impacts for sustainability.

## **REN R 751 - Agroforestry Systems**

Principles, complexity, and diversity of agroforestry. Classification of agroforestry systems. Agroforestry systems in North America, specifically Canada. Plant and soil aspects of and interactions among the components in agroforestry systems. Use of agroforestry systems to enhance land productivity and sustainability. Socioeconomic aspects of agroforestry.

Offered: F15

Instructor: Dr. Scott Chang [sxchang@ualberta.ca](mailto:sxchang@ualberta.ca)

Rational: recommended by Tonia Harris.

## **REN R 761 - Restoration Ecology**

Principles and practices of restoring ecosystem structure, function and biodiversity after natural or anthropogenic disturbances. The course focuses on ecological theory and how to apply it to ecological restoration. Topics include landscape processes and connectivity, soil-plant processes, techniques, philosophy and ethics and societal aspects of ecological restoration.

Offered: W16, 17

Instructor: Dr. Justine Karst [karst@ualberta.ca](mailto:karst@ualberta.ca)

Rational: The practice of “restoring ecosystem structure, function and biodiversity after natural or anthropogenic disturbances” has major implications for environmental sustainability.

## REN R 767 - The Mosses of Alberta: Conservation and Identification

This is an introduction to identification and conservation of the mosses of Alberta, with a strong emphasis on field identification. Students are introduced to the morphological characters used to identify Alberta mosses, with supplementary information about individual species' habitat affinities and distribution within Alberta. Lecture topics include basic morphology, conservation and management of species diversity, and rare/ endangered species found within Alberta. Students learn to identify more than 110 species from the province's six major natural regions.

Offered: W15, 16, 17

Instructor: Dr. Rene Belland [rbelland@ualberta.ca](mailto:rbelland@ualberta.ca)

Rational: [Syllabus](#), this course involves the study of “individual species’ habitat affinities” with a focus on the conservation of rare and endangered moss species in Alberta, which involves environmental sustainability.

Cross-listed

## REN R 771 - Fisheries and Wildlife Management

Principles of ecology as applied to the management of fisheries and wildlife communities. Topics include the growth and regulation of populations, interactions among species and their environments, tools and techniques used to assess and manage fisheries and wildlife. Special emphasis will be placed applying knowledge using case studies and class exercises to demonstrate key principles.

Offered: W15, 16, 17

Instructor: Mark Poesch [poesch@ualberta.ca](mailto:poesch@ualberta.ca)

Rational: **No syllabus**, recommended by Tonia Harris.

Cross-listed

## REN R 782 - Soil Remediation

Principles and methods of biological, chemical, and physical remediation of soils contaminated by hazardous chemicals and other pollutants. Topics include bioremediation of hydrocarbon contaminated soils; chemical restoration of heavy metal polluted soils, acid soils and mine spoils, and salt-affected soils; physical and biological restoration of compacted soils and hydrophobic



soils contaminated with organic compounds or wastes; and risk analysis and soil quality criteria in soil remediation.

Offered: F14, 15, 16

Instructor: Tariq Siddique [tariqs@ualberta.ca](mailto:tariqs@ualberta.ca)

Rational: the process of soil remediation is an essential process for the reclamation of sites and ensuring environmental sustainability.

## **REN R 783 - Waste Management and Utilization**

Chemical, biological, and physical properties of anthropogenic wastes, their reactions in the soil environment, theory and practice for their chemical and biological immobilization and use in agriculture, forest, and urban lands.

Offered: W15, 16, 17

Instructor: Mark Teshima [mteshima@ualberta.ca](mailto:mteshima@ualberta.ca)

Rational: Utilization and management of waste are two old and essential sustainability challenges.

## **REN R 795 - Land Reclamation**

Principles, practices, and philosophy of reclamation of degraded lands. Topics include types of land disturbances and regulations governing their reclamation, landscape development, site preparation, soil reclamation and remediation, revegetation, seed mix design, planting methods, plant species selection, monitoring, determining success, plant community ecology and change, bioengineering, phytoremediation, vegetative reclamation, and ecological restoration.

Offered: W15, 16, 17

Instructor: Dr. Anne Naeth [anaeth@ualberta.ca](mailto:anaeth@ualberta.ca)

Rational: recommended by Tonia Harris.

**Faculty of Arts -  
Sustainability Courses:**

Anthropology (ANTHR):

## **ANTHR 520 - Anthropology and the Twentieth Century**

The relationship between the development of anthropological theory across the twentieth century and the emergence of "new social movements" organized around anti-colonialism, anti-racism, feminism, ethnicity, the environment, gender, sexuality, disability, and identity. Offered in alternate years.

Offered: F16

Instructor: Kathleen Lowrey [klowrey@ualberta.ca](mailto:klowrey@ualberta.ca)

Rational: [Syllabus](#), focus of the course is on application of anthropological theories to social movements relevant to social, economic, and environmental sustainability.

Art History (ART H):

## **ART H 309 - Design Theory and History - The History and Theory of Sustainable Design\***

Historical and/or contemporary issues in design practice and theory. Prerequisite: consent of Department.

Offered: W15, 16, F16

Instructor: Dr. Joan Greer [jegreer@ualberta.ca](mailto:jegreer@ualberta.ca)

Rational: recommended by Aiden Rowe. Considered a core course for the Certificate in Sustainability

\*Not counted for the purpose of STARS Credit AC1

## **ART H 411 - Special Topics in the History of Art, Design and Visual Culture - China's Design Revolution\***

No course description

Rational: **No syllabus**, recommended by Aiden Rowe

**Cross-listed as ART H 511**

\*Not counted for the purpose of STARS Credit AC1

## Community Service Learning (CSL):

### **CSL 100 - An Introduction to Community Engagement**

An interdisciplinary introduction to community and civic engagement for students interested in preparing the groundwork for undertaking further experiential educational opportunities (e.g., Internships, Study Abroad, CSL).

Offered: W15

Instructor: Dr. Daniel M. Johnson

Rational: From [syllabus](#): “CSL 100 will examine displacement/”homelessness” and the intersections of indigeneity, settler-colonialism, economic marginalization/economic poverty, sexuality, and the non-profit industrial complex (NPIC) with an emphasis on community engagement/organizing, activism, community building, community-based action research, and anti-colonial critique rooted in understandings of the treaty relationships”

## Design (DES):

### **DES 401 - Intermediate Industrial Design Principles and Practices II**

Subject areas include research methods and the design processes; communication skills and collaborative dynamics, human factors, the psychology of design, material properties and applications for fabrication and production, market considerations. Projects are 2-D, 3-D and computer-based.

Offered: W15, 16, 17

Instructor: Ken Horne [khorne@ualberta.ca](mailto:khorne@ualberta.ca)

Rational: recommended by Aiden Rowe

## **DES 402 - Product Design Principles and Practices I**

A studio-based course which implements design principles and practices with a focus on their application to product design for batch production and mass production. Experimentation and concept development with computer technology. 2-D media and 3-D models and mock-ups.

Offered: F14, W15, F15, W16, F16, W17

Instructor: Ken Horne [khorne@ualberta.ca](mailto:khorne@ualberta.ca)

Rational: recommended by Aiden Rowe

Economics (ECON):

## **ECON 269 - Economics of the Environment**

Economic growth and the deterioration of the environment; types, causes, theory, policy, and measurement, and current Canadian environmental topics.

Offered: F14, 15, 16

Instructor: Gordon Lee [gtlee@ualberta.ca](mailto:gtlee@ualberta.ca)

Rational: [Syllabus](#), fundamentals of course are on relationship between economics and the environment

## **ECON 365 - Resource Economics**

Issues in the production of exhaustible and renewable natural resources, including exploration, extraction, and taxation; scarcity and pricing; contemporary Canadian resource policy issues.

Offered: F14, 15, 16

Instructor: Dr. Heather Eckert [heckert@ualberta.ca](mailto:heckert@ualberta.ca)

Rational: [Syllabus](#), see rationale for AREC 365

Cross-listed as AREC 365

## **ECON 467 - Environmental and Natural Resource Policy**

Environmental and natural resource law; domestic and global policy issues related to renewable and non-renewable resources.

Offered: W15, 16, 17

Instructor: Dr. Dana Andersen [dca@ualberta.ca](mailto:dca@ualberta.ca)

Rational: [Syllabus](#), course focus has major implications for environmental, social, and economic sustainability

## **ECON 566 - Environmental Economics**

Economic theory and policy relating to environmental problems; welfare and public policy issues in environmental decision making. Environmental law; transboundary pollution; economic instruments for pollution control.

Offered: W15, F15, F16

Instructor: Dr. Dana Andersen [dca@ualberta.ca](mailto:dca@ualberta.ca)

Rational: [Syllabus](#), course focuses on the “economic theory and policy relating to environmental problems; welfare and public policy issues in environmental decision making”

Human Geography and Planning (HGP):

## **HGP 250 - Natural Resources and Environmental Management**

Geographic concepts and perspectives on renewable and non-renewable natural resources.

Offered: F14, 15, 16

Instructor: Dr. Robert Summers [rjs8@ualberta.ca](mailto:rjs8@ualberta.ca)

Rational: Recommended by Stephen Johnston, considered a core course for the certificate in Sustainability

## **HGP 355 - Environmental Planning**

Introduction to issues in policy making, planning and management related to human interaction with the physical environment.

Offered: W15, 16, 17

Instructor: Dr. Leith Deacon [deacon1@ualberta.ca](mailto:deacon1@ualberta.ca)

Rational: recommended by Stephen Johnston. Course focused on the environmental assessment process, which is an essential process for sustainable development. Considered an elective course for the Certificate in Sustainability.

## **HGP 443 - Environment and Health**

An examination of relations between human health and environmental issues, particularly those related to the natural, built, and social environments.

Offered: F15, 16

Instructor: Cara Linzmayer [caral@ualberta.ca](mailto:caral@ualberta.ca)

Rational: course focus on interaction between environmental and human health, recommended by Stephen Johnston.

## **HGP 450 - Resource Management and Environmental Policy**

Roles of governmental and nongovernmental organizations, industry and private enterprise, and advocacy organizations in addressing issues of resource scarcity and environmental policy. Institutions, policies, and strategies for resource and environmental management at the provincial/state, national, and international levels.

Offered: W16

Instructor: Dr. Robert Summers [rjs8@ualberta.ca](mailto:rjs8@ualberta.ca)

Rational: Recommended by Stephen Johnston. Course focuses on building tools and learning the roles of various organizations in addressing sustainability issues. Considered an elective course for the Certificate in Sustainability

## **HGP 452 - Human Dimensions of Environmental Change**

Examination of the human dimensions of climate change. Topics include climate change politics, public perceptions and impacts, vulnerability and resilience, mitigation and adaptation.

Offered: F14, W17

Instructor: Dr. Tara McGee [tmcgee@ualberta.ca](mailto:tmcgee@ualberta.ca)

Rational: Recommended by Stephen Johnston. Considered an elective course for the Certificate in Sustainability

## **HGP 550 - Advanced Resource Management and Environmental Policy**

Roles of governmental and nongovernmental organizations, industry and private enterprise, and advocacy organizations in addressing issues of resource scarcity and environmental policy. Institutions, policies, and strategies for resource and environmental management at the provincial/state, national, and international levels.

Offered: W16

Instructor: Dr. Robert Summers [rjs8@ualberta.ca](mailto:rjs8@ualberta.ca)

Rational: Course focus is “addressing issues of resource scarcity and environmental policy” and “environmental management at the provincial/state, national, and international levels”

## **HGP 552 - Advanced Human Dimensions of Global Change**

Investigation of issues related to the human use of resources and impact on the regional and global environment. Critical review of alternative frameworks for assessing, mitigating and adapting to global environmental change.

Offered: F14, W17

Instructor: Dr. Tara McGee [tmcgee@ualberta.ca](mailto:tmcgee@ualberta.ca)

Rational: Focus of the course is on “issues related to the human use of resources and impact on

the regional and global environment”

History (HIST):

## **HIST 359 - Canadian Environmental History**

Brings the natural environment onto a shared stage with social, economic, political and cultural history in Canada from the last ice age to the present.

Offered: W16, 17

Instructor: Dr. Liza Piper [epiper@ualberta.ca](mailto:epiper@ualberta.ca)

Rational: recommended by Jaymie Heilman. Considered an elective course for the Certificate in Sustainability. Focus of the course on the “social, economic, political and cultural” environmental history of Canada

## **HIST 460 - Topics in Canadian History\***

There is no description available for this course.

Rational: recommended by Jaymie Heilman when “taught by Liza Piper as Health and Health and Environmental History; History of Rocky Mountains (which I will be doing in 2018), or Canadian Environmental History”

\*Not included for the purposes of STARS credit AC1

## **HIST 478 - Topics in the History of the Canadian North\***

There is no description available for this course.

Instructor: Dr. Liza Piper [epiper@ualberta.ca](mailto:epiper@ualberta.ca)

Rational: recommended by Jaymie Heilman when “taught by Liza Piper as Science, Environment, and Society in the North.”

\*Not included for the purposes of STARS credit AC1



Interdepartmental (INT D):

## INT D 565 - Natural Resource and Environmental Economics

Economic analysis of renewable resource and environmental issues. Renewable resource theory with applications to the fishery, forestry, soils and wildlife. Economic analysis of environmental protection and policy. Topics in applied benefit-cost analysis including the valuation of non-market goods and services.

Offered: W16

Instructor: Wic Adamowicz [adamowic@ualberta.ca](mailto:adamowic@ualberta.ca)

Rational: course focus is on “economic analysis of renewable resource and environmental issues”

Cross listed

## INT D 665 - Advanced Natural Resource Economics

Applied economic modeling of resource utilization and environmental issues with a focus in forestry and agriculture. Topics may include current Canadian and international issues in the area of environmental valuation, energy, climate change, biodiversity and conservation as related to Forestry and Agriculture.

Offered: W15, 16, 17

Instructor: Bruno Wichmann [moreiraw@ualberta.ca](mailto:moreiraw@ualberta.ca)

Rational: Topics covered in the course “include current Canadian and international issues in the area of environmental valuation, energy, climate change, biodiversity and conservation as related to Forestry and Agriculture.”

Cross listed

Philosophy (PHIL):

## PHIL 355 - Environmental Ethics

Philosophical dimensions of issues raised by our relationship to the environment.

Offered: W15, F15, F16

Instructor: Dr. Jennifer Welchman [welchman@ualberta.ca](mailto:welchman@ualberta.ca)

Rational: Recommended by Marie-Eve Morin.

## **PHIL 359 - Topics in Christian Philosophy: Philosophy and the Oil Sands\***

Description: Oil is a substance without which contemporary life would be unthinkable. It runs our industries and private lives, and there are few, if any, aspects of modern existence where its impact is not present. Yet, despite this, it is topic rarely addressed in philosophical discourse. How does oil impact not only our environment but our politics and culture? These are important questions are strangely absent from public and academic debate. However, as we move to develop the Alberta oil sands, with its estimated 1.7 billion potential barrels of oil, it is clear that we can no longer ignore these questions. This course will critically examine the ethical, environmental, socio-political and cultural dimensions of petroleum and oil sands development, including topics such as social and environmental justice, indigenous rights, oil and democratic culture, the climate change and peak oil debate, renewable energy and the politics of sustainability, and the oil sands in popular culture.

Instructor: Richard Kover [kover@ualberta.ca](mailto:kover@ualberta.ca)

Offered: W15

Rational: recommended by Denise Young (St. Joseph's College).

\*Not included for the purposes of STARS credit AC1

## **PHIL 368 - Topics in Social Justice\***

Variable content course which may be repeated if topic(s) vary. From Marie-Eve Morin F14: "Equality and Social Justice"

Instructor: Dr. Jennifer Welchman [welchman@ualberta.ca](mailto:welchman@ualberta.ca)

Rational: recommended by Marie-Eve Morin.

\*Not included for the purposes of STARS credit AC1

## **PHIL 451 - Topics in the History of Moral and Political Philosophy\***

No Course Description

Offered: W16

Instructor: Dr. Jennifer Welchman [welchman@ualberta.ca](mailto:welchman@ualberta.ca)

Rational: recommended by Marie-Eve Morin when the topic is “virtue theory and the environment”

Cross-listed as Phil 550

\*Not included for the purposes of STARS credit AC1

## **PHIL 470 - Topics in Social and Political Philosophy\***

Offered: W15 - Individual Freedom and Social Equality - Howard Nye [hnye@ualberta.ca](mailto:hnye@ualberta.ca)

F16 - Global Health Justice - Glenn Grier [glenn.griener@ualberta.ca](mailto:glenn.griener@ualberta.ca)

Rational: recommended by Marie-Eve Morin.

Cross-listed as Phil 570

\*Not included for the purposes of STARS credit AC1

Sociology (SOC):

## **SOC 269 - Introductory Sociology of Globalization**

Introduces various aspects of globalization and its impact on our lives at local, national, and international levels. Prerequisite: SOC 100 or consent of instructor.

Offered: F14, W15, Sp15, Su15, F15, W16, Sp16, F16, W17

Instructor: Dr. Sourayan Mookerjea [sourayan@ualberta.ca](mailto:sourayan@ualberta.ca)

Rational: Considered a core course for the Certificate in Sustainability, course on the relationship between globalization and its effects on various cultures and human rights, cultural vitality, and

social sustainability as it relates to development.

## **SOC 291 - Introduction to Environmental Sociology**

Sociological examination of the relationship between human societies and the natural environment.

Offered: W15, 16, 17

Instructor: Dr. Kenneth Caine [kcaine@ualberta.ca](mailto:kcaine@ualberta.ca)

Rational: Environmental sociology is a sustainability topic

## **SOC 580 - Colonialism, Post-colonialism and Globalization**

There is no description available for this course.

Offered: F16

Instructor: Dr. Sourayan Mookerjea [sourayan@ualberta.ca](mailto:sourayan@ualberta.ca)

Rational: recommended by Aiden Rowe, the topic has significant implications for social and cultural sustainability, and environmental sustainability as it relates to world trade and resource use

## **SOC 656 - Topics in Environmental Sociology**

Topics course

Offered: F15

Instructor: Dr. Kenneth Caine [kcaine@ualberta.ca](mailto:kcaine@ualberta.ca)

Rational: Syllabus saved in folder, this topic uses an “environmental sociology perspective” to consider power relations, and other aspects of sustainability which have social, environmental, and economic implications

\*Not included for the purposes of STARS credit AC1

Science, Technology, and Society (STS):

## **STS 210 - Environment, Science, Culture, and Values**

An examination of the interrelations between human cultural frameworks and environmental issues, emphasizing an interdisciplinary humanities and social sciences perspective.

Offered: W17

Instructor: Richard Kover [kover@ualberta.ca](mailto:kover@ualberta.ca)

Rational: Course takes an interdisciplinary approach to sustainability issues

Women and Gender Studies (WGS):

## **WGS 240 - Feminism and Food**

Women's material relationships to food from a variety of feminist perspectives.

Offered: F15, Su15, F16

Instructor: Esther Rosario [erosario@ualberta.ca](mailto:erosario@ualberta.ca)

Rational: Recommended by Michelle Meagher. Considered an elective course for the Certificate in Sustainability

## **WGS 310 - Gender, Development, and Beyond**

Study of the lives of men and women in the developing world, focusing on their experiences in the family, school, paid work, and the market, and on such development issues as health, environment, and human rights. Prerequisite: W ST 201 or consent of the Program.

Offered: W15, 16, F16

Instructor: Dr. Philomina Okeke-Ihejirika [pokeke@ualberta.ca](mailto:pokeke@ualberta.ca)

Rational: Course focuses explicitly on health, environment, and human rights, which all have implications for sustainability

## **WGS 390 - Ecofeminism**

Feminist approaches to environmental ethics and politics. Prerequisite: Any 100 or 200 level WGS or W ST course, or consent of department.

Offered: W17

Instructor: Dr/ Chloe Taylor [chloe3@ualberta.ca](mailto:chloe3@ualberta.ca)

Rational: Recommended by Michelle Meagher. Considered an elective course for the Certificate in Sustainability

## **WGS 498 - Topics in Women's and Gender Studies - Anthropocene Feminism\***

No course description

Rational: recommended by Michelle Meagher.

**Cross-listed as GSJ 507**

\*Not included for the purposes of STARS credit AC1

Writing (WRITE):

## **WRITE 494 - Advanced Creative Writing: Poetry**

*No description*

Offered: W15, 16

Instructor: Christine Stewart [castewar@ualberta.ca](mailto:castewar@ualberta.ca)

Rational: I've taken this course and the focus is on understanding of place through a lens that is both socially and environmentally conscious, although this is not necessarily reflected in the course content related in the syllabus. Specifically the focus on bringing in the Boyle Street Writing Collective to create a respectful and shared learning environment, and Christine organizing food every class so that we could all share a meal were unique in my classroom experience. However the content and delivery method centers around environmental and social sustainability

## Faculty of Arts - Courses that include Sustainability:

Anthropology (ANTHR):

### **ANTHR 230 - Anthropology of Science, Technology, and Environment**

Science as a cultural practice, cultural effects and globalization of technology, changing views of nature, gender and science, traditional ecological knowledge, and the evolution of technology.

Offered: W17

Instructor: Marko Zivkovic [zivkovic@ualberta.ca](mailto:zivkovic@ualberta.ca)

Rational: [Syllabus](#), topics of the course, including “gender and science” and “traditional ecological knowledge” have important implications for sustainability

### **ANTHR 372 - Anthropology of Food**

Examination of the relationship between food and culture through historical and cross-cultural analysis of foodways.

Offered: F14, W17

Instructor: Dr. Jean Debernardi [jdeberna@ualberta.ca](mailto:jdeberna@ualberta.ca)

Rational: [Syllabus](#), considered an elective course for the Certificate in Sustainability

Art History (ART H):

## **ART H 209 - History of Design**

Introduction to the development of design since the Industrial Revolution.

Offered: F14, 15, 16

Instructor: Dr. Joan Greer [jegreer@ualberta.ca](mailto:jegreer@ualberta.ca)

Rational: recommended by Aiden Rowe

## **ART H 456 - Topics in Art from the Mid-20th Century to the Present - Art in the Anthropocene\***

No course description

Offered: F16

Instructor: Dr. Natalie Loveless [ns1@ualberta.ca](mailto:ns1@ualberta.ca)

Rational: **No syllabus**, recommended by Aiden Rowe.

**Cross-listed as ART H 556**

\*Not included for the purposes of STARS credit AC1

## **ART H 611 - Special Topics in Art History - The History and Theory of Sustainable Design\***

No course description

Instructor: Lisa Claypool [claylisa@ualberta.ca](mailto:claylisa@ualberta.ca)

Rational: **No syllabus**, recommended by Aiden Rowe.

\*Not included for the purposes of STARS credit AC1



Classics (CLASS):

## **CLASS 261 - Women, Gender and Sexuality in the Ancient World**

The role of women and the construction of gender and sexuality in Greek and Roman society from the Archaic period to Late Antiquity.

Offered: F15, W17

Instructor: Dr. Adam Kemezis [kemezis@ualberta.ca](mailto:kemezis@ualberta.ca)

Rational: historical study with implications for social sustainability

## **CLASS 473 - Topics in Classical Archaeology\***

No course description

Rational: **No syllabus, seminar course.** Recommended by Jaymie Heilman as it “contains aspects of sustainability. In this course which focuses on domestic space students will assess the process of urbanization in Classical and Hellenistic Greece from the perspective of the household. Two of the classes will focus on domestic economy and we will discuss the varying levels of household participation and contributions to the development and maintenance of urban environments during the Classical and Hellenistic periods. The students will need to work with the concept of sustainability in a number of case studies focused on particular Classical and Hellenistic cities (Olynthus, Eretria, New Halos etc.): they need to assess whether households are willing and able to invest in urban landscapes and will study the reasons and consequences of these investments or lack thereof”

**Cross-listed as CLASS 515**

\*Not included for the purposes of STARS credit AC1

Community Service Learning (CSL):

## **CSL 300 - Theory and Practice in Community Service-Learning**

An in-depth exploration of theories and practices of civic engagement and community change for students who have already completed a course with a CSL component and who wish to extend their volunteer experience. Prerequisite: Completion of a course with a CSL component or consent

of instructor. Note: For information about courses in programs and departments across the Faculty of Arts that offer a CSL component, see the link on the CSL website, [www.csl.ualberta.ca](http://www.csl.ualberta.ca)

Offered: W15, W16, F16

Instructor: Dr. Jason Taylor [jdtaylor@ualberta.ca](mailto:jdtaylor@ualberta.ca)

Rational: From [syllabus](#): “The first part of the course will explore the debates concerning the goals of community-engaged learning and the purposes of both education and universities (both broadly construed). We will focus on being clear about what Community Service-learning and education are in the ideal, by explicating the theoretical backgrounds to the former in light of the ideal understanding of the latter. This will lead us readily into the extent and limits of who ‘gets’ CSL experience (for both students, instructors, and those in the community). This will set us up to explore the gap that exists between theory and practice, and the ways in which **service-learning, community engagement, and social change** affect this gap and are affected by it [emphasis added]”

Design (DES):

## DES 139 - Design Fundamentals II

Further study of the conceptual and practical concerns of the design disciplines. Two- and three-dimensional design-related studies.

Offered: W 15 (3), 16 (3), 17 (3)

Instructor: Aiden Rowe [rowe1@ualberta.ca](mailto:rowe1@ualberta.ca)

Rational: recommended by Aiden Rowe.

## DES 300 - Foundations of Industrial Design I

Introduction to the principles, methods and techniques of industrial design. Studies of three-dimensional design address concept, form and function in a social/environmental context and involve projects combining theory and practice in two and three dimensions.

Offered: F14 (2), 15 (2), 16 (2)

Instructor: Prof Robert Lederer [robert.lederer@ualberta.ca](mailto:robert.lederer@ualberta.ca)

Rational: course topics include a focus on the “form and function in a social/environmental context” of design.

## **DES 301 - Foundations of Industrial Design II**

Continuing study of the principles, methods and techniques of industrial design. Studies of three-dimensional design address concept, form and function in a social/environmental context and involve projects combining theory and practice in two and three dimensions. Prerequisite: DES 300.

Offered: W15 (2), 16 (2), 17 (2)

Instructor: Prof Robert Lederer [robert.lederer@ualberta.ca](mailto:robert.lederer@ualberta.ca)

Rational: course topics include a focus on the “form and function in a social/environmental context” of design.

## **DES 400 - Intermediate Industrial Design Principles and Practices I**

Subject areas include research methods and the design processes; communication skills and collaborative dynamics, human factors, the psychology of design, material properties and applications for fabrication and production, market considerations. Projects are 2-D, 3-D and computer-based.

Offered: F14 (2), 15 (2), 16 (2)

Instructor: Ken Horne [khorne@ualberta.ca](mailto:khorne@ualberta.ca)

Rational: recommended by Aiden Rowe.

## **DES 483 - Seminar on Design Issues**

Contemporary design issues in the fields of theory, criticism, history, professional practice and social concerns.

Offered: W15 (3), 16 (3), 17 (2)

Rational: recommended by Aiden Rowe.

## **DES 501 - The Practice of Industrial Design II**

Subject areas include design and culture; human factors; social, environmental and economic implications of design; appropriate technologies; production considerations processes; communication skills and collaborative dynamics; human factors; the psychology of design; material properties and applications for fabrication and production; market considerations. Projects are 2-D, 3-D and computer-based. Prerequisites: DES 500 and consent of Department. Note: Not open to students with credit in DES 570.

Offered: W15 (2), 16 (2), 17 (2)

Instructor: Ken Horne [khorne@ualberta.ca](mailto:khorne@ualberta.ca) & Robert Lederer [rlederer@ualberta.ca](mailto:rlederer@ualberta.ca)

Rational: course discusses the “social, environmental, and economic implications of design”

## **DES 593 - The Practice of Graphic Design I**

Applied practical projects and complex design systems. Problem definition, strategic planning, project management and design evaluation. Project brief and production specifications, professional practice, procedures, codes of ethics, pricing and intellectual property.

Offered: F14 (2), 15, 16

Instructor: Louise Asselstine [lea1@ualberta.ca](mailto:lea1@ualberta.ca)

Rational: recommended by Aiden Rowe.

Economics (ECON):

## **ECON 211 - Chinese Economic Development**

A survey of the characteristics of and recent developments in the Chinese economy emphasizing the nature and consequences of China's economic reforms and Canada's economic relations with China.

Offered: F14, W15, F15, W16, F16, W17

Instructor: Dr. Y Xu [vxu@ualberta.ca](mailto:vxu@ualberta.ca)

Rational: [Syllabus](#), from syllabus 2017, topics of the course include “urban-rural divide”, “inequality and poverty”, and trade which has implications for the sustainability of a global economic system

## **ECON 213 - An Introduction to the Economics of Developing Countries**

A survey of the major approaches to and problems of economic development in the less developed countries with particular emphasis on issues relating to savings and investment, income distribution, employment and population growth, and trade and aid.

Offered: F14, W15, Sp15, F15, W16, Sp16, F16, W17

Instructor: Scott Beesley [beesley@ualberta.ca](mailto:beesley@ualberta.ca)

Rational: [Syllabus](#), the study of the economies of developing nations has strong implications for economic and social sustainability, and potential implications for environmental sustainability as well.

## **ECON 222 - Technology, Institutions and Economic Growth**

Differences in technology and institutions are used to explain why some countries are richer than others; why economic growth rates differ across time and jurisdictions; and causes of convergence/divergence in cross-country growth rates.

Offered: W17

Instructor: Dr. R Szostak [rszostak@ualberta.ca](mailto:rszostak@ualberta.ca)

Rational: [Syllabus](#), course begins with discussion of “the nature of economic growth, and an ethical discussion of whether growth is good (including its environmental impacts)”, involves multidisciplinary approach to the study of economic growth which has environmentally and socially sustainability implications. Overall focus of course is on economic growth which syllabus at times relates explicitly to sustainability.

## **ECON 357 - Health Economics**

Resource allocation and public policy in health care, including determinants of health status, market structures, incentives and the effects of imperfect information.

Offered: F15, 16

Instructor: Pinar Gunes [gunes@ualberta.ca](mailto:gunes@ualberta.ca)

Rational: [Syllabus](#), course topics include “efficiency and equity” of healthcare funding and distribution as well as “determinants of population health”, insurance and funding, all of which have implications for social and economic sustainability. Included because the course specifically touches on allocation to solve inequalities, as well as public policy.

## **ECON 366 - Energy Economics**

The economics of producing and consuming energy: pricing, role in economic growth; energy sources and markets; the role of government; regulation and other energy policy issues.

Offered: F14, 15, 16

Instructor: Dr. Dana Andersen [dca@ualberta.ca](mailto:dca@ualberta.ca)

Rational: [Syllabus](#), topics of the course include climate change policy, considered a core course for the Certificate in Sustainability

## **ECON 414 - Economics of Developing Countries**

An introduction to models of growth and development; the role of agriculture, industry, finance, and trade in structural transformation of developing countries; approaches to development planning.

Offered: W15, 16, F16, W17

Instructor: Pinar Gunes [gunes@ualberta.ca](mailto:gunes@ualberta.ca)

Rational: [Syllabus](#), topics of the course include “poverty, health and nutrition, education and human capital, land and property rights, foreign aid, labor and migration, credit, and savings and insurance in the developing world”

## **ECON 421 - International Trade**

Nature and relevance of international trade; early trade doctrines; the theory of comparative advantage, classical and modern approaches and empirical evidence for them; new approaches to the pure theory of international trade; economic growth and international trade; market imperfections and trade; commercial policy; economic integration and the gains from trade.

Offered: F14, 15, 16, W17 (2)

Instructor: Dr. Beyza Ural Marchand [ural@ualberta.ca](mailto:ural@ualberta.ca)

Rational: [Syllabus](#), course focuses on effects of international trade “on domestic and international welfare” and “international agreements: trade, labor, and the environment”

French (FREN):

## **FREN 312 - Colonialism and Postcolonialism**

Francophone cultural texts from a post/colonial perspective, the socio-historical contexts of their production and their importance for definitions of cultural identity.

Offered: W16, 17

Instructor: Sathya Rao [srao@ualberta.ca](mailto:srao@ualberta.ca)

Rational: Strong implication for cultural vitality and identity which have implications for social sustainability

Gender and Social Justice (GSJ)

## **GSJ 505 - Gendering Development**

Examines the intersections of gender and international development with particular emphasis on feminist discourses of international development history, theory, and practices.

Offered: W17

Rational: implications for development and social sustainability

## Human Geography and Planning (HGP):

### **HGP 210 - Introductory Planning History and Practice**

No description available

Offered: W15, 16, 17

Instructor: Dr. Robert Summers [rjs8@ualberta.ca](mailto:rjs8@ualberta.ca)

Rational: Syllabus in folder, recommended by Kurt Borth

### **HGP 240 - The Urban Environment**

Introduction to urban geography emphasizing interactions between the physical environment and patterns of human settlement. Topics include models of urbanization and urban form, growth and decline in North American cities.

Offered: F14, 15, 16

Instructor: Dr. Damian Collins [damian1@ualberta.ca](mailto:damian1@ualberta.ca)

Rational: Syllabus in folder, recommended by Kurt Borth, considered an elective course for the Certificate in Sustainability

### **HGP 252 - Human Dimensions of Environmental Hazards**

Interactions between environmental hazards, individuals and communities; risk reduction strategies by members of the public and management agencies.

Offered: W15, 16, 17

Instructor: Dr. Tara McGee [tmcgee@ualberta.ca](mailto:tmcgee@ualberta.ca)

Rational: Recommended by Stephen Johnston, considered an elective course for the Certificate in Sustainability



## HGP 341 - Social and Cultural Geography

Connections between space, society and culture at multiple scales. Formation and significance of cultural landscapes, and shaping of social life by spatial arrangements.

Offered: W16, 17

Instructor: Odine Park [opark@ualberta.ca](mailto:opark@ualberta.ca)

Rational: **No syllabus**, implications for cultural vitality

## HGP 343 - Health, Space and Place

Geographic research on health and disease, including environmental, social, individual and institutional factors.

Offered: F15, F16

Instructor: Dr. Damian Collins [damian1@ualberta.ca](mailto:damian1@ualberta.ca)

Rational: Course discusses environmental, social, and individual factors health, place, and space.

## HGP 381 - Topics in Human Geography and Planning\*

Theory and application of contemporary issues in human geography and/or planning.

Offered: F14 (2), W15, F15 (2), W16, F16 (2), W17

Instructor: Wesley Andreas [wandreas@ualberta.ca](mailto:wandreas@ualberta.ca)

Rational: **No syllabus**, recommended by Stephen Johnston, this is a topics course so we'll need to follow up

\*Not included for the purposes of STARS credit AC1

## HGP 485 - Advanced Topics in Planning\*

Exploring planning theories in the context of contemporary events phenomena.

Offered: W15, 16 (2), F16, W17

Instructor: Brian McCosh [mccosh@ualberta.ca](mailto:mccosh@ualberta.ca)

Rational: **No syllabus**, recommended by Stephen Johnston, this is a topics course so we'll need to follow up

\*Not included for the purposes of STARS credit AC1

## **HGP 495 - Planning Studio**

Practical study of community planning processes, development or redevelopment projects, or other relevant case studies. Field Work Required.

Offered: W15, 16, 17

Instructor: Dr. Robert Summers [rjs8@ualberta.ca](mailto:rjs8@ualberta.ca) & Dr. Sandeep Agrawal [sagrawal@ualberta.ca](mailto:sagrawal@ualberta.ca)

Rational: **No syllabus**, recommended by Stephen Johnston

History (HIST):

## **HIST 116 - The Emergence of the Atlantic World**

The history and legacies of the transatlantic slave trade that linked Europe, Africa, and the Americas, emphasizing economic, political, social and cultural ramifications.

Offered: W15, F15, W16

Instructor: Dr. Guy Thompson [guyt@ualberta.ca](mailto:guyt@ualberta.ca)

Rational: Course discusses the economic, political, social, and cultural ramifications of the Atlantic slave trade, which has implication for cultural vitality and social sustainability

## **HIST 366 - The Canadian West Since 1885**

Economic, social, and political aspects of regional alienation, identity, and protest.

Instructor: Liza Piper

Rational: Recommended by Jaymie Heilman

## **HIST 369 - History of the Native Peoples of Canada Since 1867**

Federal Indian policy, treaties, reserve life, Native political resurgence, and legal and constitutional developments.

Offered: W17

Instructor: Dr. Gerhard Ens [gens@ualberta.ca](mailto:gens@ualberta.ca)

Rational: **No syllabus**, implication for cultural vitality and social sustainability. Considered an elective course for the Certificate in Sustainability

Interdepartmental (INT D):

## **INT D 280 - The Mountain World: Introduction to Interdisciplinary Mountain Studies**

An interdisciplinary study of the physical and human dimensions of mountain environments. Content includes the physical (glaciers, climate, geology, etc.), biological (flora, fauna, ecology, etc.), physiological (human bodies at altitude, performance, sport, etc.), and cultural (societies, literature's, histories, etc.) dimensions of these unique regions, as well as a critical analysis of the processes of change and influence shaping local and regional mountain environments around the globe, past and present. (Offered jointly by the Faculty of Physical Education and Recreation and the Faculty of Science) [Faculty of Physical Education and Recreation]

Offered: W15, 16, 17

Instructor: Dr. Zac Robinson [zacharyr@ualberta.ca](mailto:zacharyr@ualberta.ca)

Rational: **Cannot find syllabus**, Dr. Janice Causegrove Dunn recommended this course, also considered core course for the Certificate in Sustainability

## INT D 303 - Economics of World Food and Agriculture

Economic issues in international agriculture including the world food problem; the role of agriculture in development; agricultural and food trade; biotechnology and associated environmental and globalization issues.

Offered: W15, 16, 17

Instructor: Dr. Brent Swallow [bswallow@ualberta.ca](mailto:bswallow@ualberta.ca)

Rational: course touches on “environmental and globalization issues” related to agriculture and food trade.

Cross-listed

## INT D 318 - Technologies for Endangered Language Documentation

Provides Canadian Indigenous language speakers with the technical skills needed to digitally archive their languages in a database or on the web with text, sound, images, and video. These digital resources can be incorporated into interactive multimedia resources for access by community-based learners and second-language teachers.

Offered: F14, W15, Su15, F16

Instructor: Timothy mills [timills@ualberta.ca](mailto:timills@ualberta.ca)

Rational: Provides specific skills for the documentation of endangered language which has significant implications for cultural vitality and social sustainability

## INT D 340 - Regional Planning

The key issues and challenges of regional planning such as how regional planning will be examined including: historical development of regionalism in Canada and Alberta, how regionalism has helped and hindered the development of communities, nationally, provincially, locally. Students will gain experience in reviewing and critiquing concepts and theories that are characteristic of regionalism.

Offered: W15, 16, 17

Instructor: Jeff Greene [jgreene1@ualberta.ca](mailto:jgreene1@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

## INT D 404 - Global Citizenship: Contemporary Issues and Perspectives

This course aims to provide students the opportunity to engage with current literature and experts, and to extend their own research skills as they strive to understand how global citizenship might frame the roles of individuals and communities with which they will interact in increasingly diverse social, economic, and political contexts that are not restricted by geographical or social boundaries. This course will examine select theories and case studies that focus on the constructions of global citizenship, and how citizenship is (has been) lived, denied, recreated and/or re-imagined.

Offered: W15, Sp15, W16, Sp16, W17

Instructor: Shelane Williams [shelane@ualberta.ca](mailto:shelane@ualberta.ca)

Rational: considered a core course for the Certificate in Sustainability

Linguistics (LING):

## LING 324 - Endangered Languages

An examination of languages facing extinction: how language endangerment arises, local and global factors affecting loss, how linguistic and cultural diversity suffers, and how linguists can respond.

Offered: F14, 15, 16

Instructor: Jordan Lachler [lachler@ualberta.ca](mailto:lachler@ualberta.ca)

Rational: Course has implications for cultural vitality considered an elective course for the Certificate in Sustainability

Philosophy (PHIL):

## **PHIL 250 - Contemporary Ethical Issues**

An examination of questions of right and wrong, good and evil, and reasons for action, through the study of ethical thought of authors such as Plato, Aristotle, Hobbes, Kant, and Mill.

Offered: F14, 15, 16

Instructor: Howard Nye [hnye@ualberta.ca](mailto:hnye@ualberta.ca)

Rational: Recommended by Marie-Eve Morin

## **PHIL 269 - Moral Issues in a Christian Context**

Analysis and evaluation of selected moral and social issues.

Offered: F14

Instructor: Richard Kover [kover@ualberta.ca](mailto:kover@ualberta.ca)

Rational: **No syllabus**, recommended by Denise Young (St. Joseph's College). As "an introduction to contemporary moral issues from a Christian context through study and critical discussion of selected texts. Emphasis will be placed on moral issues such as pacifism and just war theory, as well as social, economic and environmental justice" including modules on "Charity, Economic Justice, Consumerism and Capitalism" and "Animal Rights, Vegetarianism and Environmentalism"

## **PHIL 279 - Philosophy of Hunting**

The moral, conceptual, existential, environmental, socio-political, and spiritual issues raised by the practice of hunting by humans.

Other Course Outline Info from Fall 2016:

Older than humanity's 'oldest profession,' hunting is a philosophically weighty practice that contemporary societies increasingly struggle to understand. This course critically examines the ethical, experiential, conceptual, environmental and socio-political status of hunting, including topics such as animal rights, fair chase, and environmentalism, subsistence vs. trophy hunting, human nature, predation, death, gender, race, religion, and class.

Offered F16

Instructor: Nathan Kowalsky [nek@ualberta.ca](mailto:nek@ualberta.ca)

Rational: Recommended by Denise Young (St. Joseph's College). Module on: "Hunting and Nature" and "Hunting and Culture" relevant to environmental and cultural sustainability.

## PHIL 345 - Humans and Animals

Philosophical approaches to the question of comparative human and animal cognition, emotion, awareness, and language. The course will also address the problem of animal rights vis-à-vis individual and institutional human interests.

Offered: F14, W16, 17

Instructor: Howard Nye [hnye@ualberta.ca](mailto:hnye@ualberta.ca)

Rational: **No syllabus**, recommended by Marie-Eve Morin. Relates to animal rights and human-animal interactions.

## PHIL 384 - Topics in Practical Ethics - Business\*

Variable content course which may be repeated if topic(s) vary.

Offered: W16, 17

Instructor: Dr. Jennifer Welchman [welchman@ualberta.ca](mailto:welchman@ualberta.ca)

Rational: recommended by Marie-Eve Morin.

\*Not included for the purposes of STARS credit AC1

## **PHIL 450 - Topics in Ethics - Intergenerational Ethics\***

No course description

Offered: W17

Instructor: Dr. Jennifer Welchman [welchman@ualberta.ca](mailto:welchman@ualberta.ca)

Rational: recommended by Marie-Eve Morin.

\*Not included for the purposes of STARS credit AC1

Political Science (POL S):

## **POL S 250- The Politics of Gender**

An examination of gender, diversity and relations of power in political life.

Offered: W15, F15, F16, W17

Instructor: Dr. Siobhan Byrne [scbyrne@ualberta.ca](mailto:scbyrne@ualberta.ca)

Rational: implications for social justice and sustainability

Also listed as POL S 350

## **POL S 327 - Aboriginal Peoples and Politics in Canada**

This course is an examination of different historical and contemporary issues associated with Aboriginal politics.

Offered: F14, 15, 16

Instructor: Dr. Isabel Altamirano-Jimenez [isabel@ualberta.ca](mailto:isabel@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability, implications for social justice and sustainability



## **POL S 333 - Ecology and Politics**

This course examines different approaches to understanding the links between politics, society and ecology.

Offered: W15, F15, 16

Instructor: Prof Laurie Adkin [ladkin@ualberta.ca](mailto:ladkin@ualberta.ca)

Rational: Considered an elective course for the Certificate in Sustainability

## **POL S 441 - Gender and Public Policy**

The relationship between gender and public policy in Canada. Of particular concern are effects of restructuring, decentralization, privatization and deregulation on women.

Offered: W17

Instructor: Dr. Lois Harder [lharder@ualberta.ca](mailto:lharder@ualberta.ca)

Rational: implications for social sustainability

## **POL S 444 - Global Critical Race Theory**

Politics of race, racialization and anti-racism in international and comparative perspective.

Offered: W16, 17

Instructor: Malinda Smith [malinda@ualberta.ca](mailto:malinda@ualberta.ca)

Rational: implication for social sustainability

## **POL S 445 - Topics in Globalization and Governance - Indigeneity, Gender, and the Environment\***

A variable content course, which may be repeated if topics vary.

Rational: some topics considered elective courses for the Certificate in Sustainability

\*Not included for the purposes of STARS credit AC1

## **POL S 544 - Global Critical Race Theory**

Politics of race, racialization and anti-racism in international and comparative perspective.

Offered: W16, 17

Instructor: Malinda S Smith [malinda@ualberta.ca](mailto:malinda@ualberta.ca)

Rational: implications for social justice and sustainability

Cross-listed

## **POL S 690 - Gender and Politics**

A survey of various theoretical perspectives on gender, ranging from liberal to postmodern, as well as issues and debates in gender research. Also addressed are questions of difference, identity, and conflict arising from, among others, race, class, sexuality, and north-south relations.

Offered: W16, 17

Instructor: Dr. Siobhan Byrne [scbyrne@ualberta.ca](mailto:scbyrne@ualberta.ca)

Rational: implications for social justice and sustainability

Sociology (SOC):

## **SOC 100 - Introductory Sociology**

An examination of the theory, methods, and substance of Sociology. The study of how societies are shaped including economy, culture, socialization, deviance, stratification, and groups. The process of social change through social movements, industrialization, etc.

Offered: F14 (6), W15 (4), Sp15 (2), Su15 (2), F15 (6), W16 (6), Sp16 (2), Su16 (2), F16 (6), W15 (5)

Instructor: Dr. Harvey Khran [hkrahn@ualberta.ca](mailto:hkrahn@ualberta.ca)

Rational: [Syllabus](#): "focus will be on social structures, social institutions, social inequality, and social change"

## **SOC 203 - Social Problems**

Selected structural issues in various societies, including inequality, population growth, environment, and human rights. Note: Not to be taken by students with credit in SOC 102.

Offered: F14, W15, Sp15, F15, W16, Sp16, F16, W17

Instructor: Leslie Cove [lcove@ualberta.ca](mailto:lcove@ualberta.ca)

Rational: Course discusses topics including "inequality, population growth, environment, and human rights" all of which are sustainability issues

## **SOC 260 - Inequality and Social Stratification**

Introduction to the study of structured social inequalities and poverty; major theoretical approaches; findings from key empirical studies, with emphasis on Canada.

Offered: F14, W15, F15, W16, Su16, F16, W17

Instructor: Marcella Siqueira Cassiano [cassiano@ualberta.ca](mailto:cassiano@ualberta.ca)

Rational: implications for social justice and sustainability

## **SOC 343 - Social Movements**

Empirical studies of movements for social change and the dynamics of collective mobilization in a local, national, and international context.

Offered: F14, Sp15, F15, 16

Instructor: Prof Dominique Clement [clement2@ualberta.ca](mailto:clement2@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability implications for social justice and sustainability

## **SOC 369 - Sociology of Globalization**

Critically examines various aspects of globalization from the perspective of world-system studies.

Offered: W16

Instructor: Dr. Sourayan Mookerjea [sourayan@ualberta.ca](mailto:sourayan@ualberta.ca)

Rational: implications for social justice and sustainability

## **SOC 370 - Racism and Decolonization**

Examines decolonizing cultures with an emphasis on racism and its connection to other forms of social inequality, capitalism, multiculturalism and globalization.

Offered: F14, F15, W17

Instructor: Dr. Sourayan Mookerjea [sourayan@ualberta.ca](mailto:sourayan@ualberta.ca)

Rational: implications for social justice and sustainability

## **SOC 496 - Human Rights in International Perspective**

Human rights theories, issues and controversies in local, national and international context.

Offered: F14, 15, W17

Instructor: Dominique Clement [clement2@ualberta.ca](mailto:clement2@ualberta.ca)

Rational: implications for social justice and sustainability

Spanish (SPAN):

## **SPAN 323 - Latin American Literature and the**

## **Environment**

The study of the relationship of Latin American writing and writers to the environment with a focus on the landscape and current ecological concerns.

Offered: F14

Instructor: Odile Cisneros [cisneros@ualberta.ca](mailto:cisneros@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability considers “current ecological concerns”

Women and Gender Studies (WGS):

## **WGS 101 - Representations of Girls and Women**

An exploration of the impact that cultural representations of femininity have on the political, economic, and social lives of girls and women throughout the world.

Offered: F14 (6), 15, 16

Instructor: Dr. Felice Lifshitz [felice@ualberta.ca](mailto:felice@ualberta.ca)

Rational: implications for social sustainability

## **WGS 102 - Gender and Social Justice**

Examines social and cultural constructions of gender, sexuality, race, class, and disability as well as visions for social justice.

Offered: W16, Sp16, W17

Instructor: Emilia Nielsen [evnielse@ualberta.ca](mailto:evnielse@ualberta.ca)

Rational: implications for social sustainability

## **WGS 244 - Disability Studies**

Interrogation of medical model of disability through cultural disability studies, including feminist and queer perspectives. Introduces students to social issues in disability studies, social policy, and social justice.

Offered: W16, 17

Instructor: Emilia Nielsen [evnielse@ualberta.ca](mailto:evnielse@ualberta.ca)

Rational: Course focuses on issues of disability from a perspective relevant to social sustainability. Recommended by Michelle Meagher.

## **WGS 250 - Gender and Science**

Interdisciplinary exploration of gender and science, with an emphasis on intersections of gender, race, sexuality, and politics in historical and contemporary scientific practices. Note: Not open to students with credit in W ST 350 or WGS 350.

Offered: F15, 16

Instructor: Esther Rosario [erosario@ualberta.ca](mailto:erosario@ualberta.ca)

Rational: implications for social sustainability and health

## **WGS 431 - Feminism and Sexual Assault**

Interdisciplinary consideration of conceptual, political and legal strategies that feminists have deployed to confront sexual coercion with an emphasis on contemporary North American context.

Offered: F15

Instructor: Randelle Nixon [rlnixon@ualberta.ca](mailto:rlnixon@ualberta.ca)

Rational: implications for social sustainability and health

**Augustana Faculty -  
Sustainability Courses:**

Augustana Faculty - Biology:

## **AUBIO 350 - Conservation Theory and Biodiversity in Tropical Systems**

Introduction to the basic concepts of conservation biology. The scope of conservation biology and levels of biodiversity are explored, as are aspects of tropical ecology related to conservation.

Offered: F15

Instructor: Dr. Doris Audet [daudet@ualberta.ca](mailto:daudet@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

Cross-listed

## **AUBIO 354 - Freshwater Ecology and Management**

Introduction to the biological, chemical and physical features of freshwater ecosystems, and how they relate to ecological processes in and adjacent to aquatic systems. The course will examine the role of ecological patterns in lakes, ponds, rivers and streams, with an emphasis on freshwater systems and their management in western Canada.

Offered: F15

Instructor: Dr. Glynnis Hood [ghood@ualberta.ca](mailto:ghood@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

Cross-listed

## **AUBIO 459 - Field Studies in Tropical Ecology and Conservation**

Field course that addresses problems of biodiversity and conservation in tropical environments. The student participates in field workshops, and designs and conducts his or her own field project to answer questions related to ecological and biological conservation.

Offered: W16

Instructor: Dr. Doris Audet [daudet@ualberta.ca](mailto:daudet@ualberta.ca) & Anne McIntosh [amcintos@ualberta.ca](mailto:amcintos@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

Cross-listed

Augustana Faculty - Economics:

## **AUECO 341 - Environmental Economics**

Examination of the relationships between the economy and the environment. Emphasis is placed on the application of economic analysis to various environmental issues.

Offered: W15, 16, 17

Instructor: Dareskedar Amsalu [amsalu@ualberta.ca](mailto:amsalu@ualberta.ca)

Rational: considered a core course for the Certificate in Sustainability

Cross-Listed

## **AUECO 346 - Agricultural Economics**

Study of economic theory and policy relating to the agricultural sector of the economy. Emphasis is placed on the economic aspects of agricultural production, marketing, finance, and resource use with particular reference to agricultural policy in Canada and Alberta.

Offered: F14, W17

Instructor: Dareskedar Amsalu [amsalu@ualberta.ca](mailto:amsalu@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

Augustana Faculty - Environmental Studies (AUENV):

## **AUENV 120- Human Activities and the Natural**



## Environment

Introductory analysis of the interrelationships between society and the natural world, environmental consequences, and human perceptions. The characteristics and interactions of physical environmental systems and various facets of resource management (including forestry, agriculture, fisheries, protected areas, endangered species, and pollution) are described and analyzed.

Offered: F14, W15, F15, W16, F16, W17

Instructor: Johanna Weston [weston@ualberta.ca](mailto:weston@ualberta.ca)

Rational: considered a core course for the Certificate in Sustainability

## AUENV 320 - Parks and Wilderness

Examination of scientific principles and concepts underlying parks, wilderness and other protected area systems with emphasis on Canada. Topics include history, philosophy, conceptual frameworks, and roles in sustainability, and types of biological and geographic designations. Prerequisite: One of AUBIO 253, AUENV 120, AUGEO 120, consent of the instructor. Note: Credit may be obtained for only one of AUENV 320, 420, AUGEO 320, 420.

Offered: F15

Instructor: Dr. Glen Hvenegaard [gth@ualberta.ca](mailto:gth@ualberta.ca)

Rational: considered a core course for the Certificate in Sustainability.

Cross-listed

## AUENV 324 - Resource and Environmental Management

Integration of both physical and human phenomena in understanding natural resources, their dimensions and boundaries. Basic concepts in resource analysis and management: the decision-making process, management frameworks and strategies, legislation and regulation, impact assessment, the role of perceptions, attitudes and behavior, and the impact of public participation/interest groups in the development of natural resources.

Offered: W15, F15, W17

Instructor: Dr. Glynnis Hood [ghood@ualberta.ca](mailto:ghood@ualberta.ca)

Rational: considered a core course for the Certificate in Sustainability

## **AUENV 328 - Environmental Politics**

Examination of contemporary debates in, and the evolution of, environmental policy and politics. This course will focus on Canadian issues in a comparative perspective, exploring topics such as environmental political theory, the policy cycle, social movements, international issues, and related case studies.

Offered: W15, 17

Instructor: Lars Hallstrom [hallstro@ualberta.ca](mailto:hallstro@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

Cross-listed

## **AUENV 341 - Environmental Economics**

Examination of the relationships between the economy and the environment. Emphasis is placed on the application of economic analysis to various environmental issues.

Offered: W15, 16, 17

Instructor: Dareskedar Amsalu [amsalu@ualberta.ca](mailto:amsalu@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

Cross-listed

## **AUENV 344 - Environmental Psychology**

Systematic study of the dynamic interchange between people and their social and physical environmental contexts. Topics include theories of environmental perception, the effects of crowding, and the impact of natural/urban settings, the effects of building design and colors, and managing limited resources.

Offered: F14, 16

Instructor: Sean Moore [semoore@ualberta.ca](mailto:semoore@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

Cross-listed

## **AUENV 345 - Religion and Ecology**

Examination of the relationship between ecology and religion from Christian and non-Christian perspectives. The course looks at ecological spirituality, ecotheology, animal rights, deep ecology, ecoactivism, and ecofeminism. It also devotes substantial time to ecological themes in Asian (Hindu, Buddhist, and Chinese) and traditional (native American and Australian aboriginal) religions.

Offered: F14, W16, W17

Instructor: Joseph Wiebe [jwiebe@ualberta.ca](mailto:jwiebe@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

Cross-listed

## **AUENV 350 - Conservation Theory and Biodiversity in Tropical Systems**

Introduction to the basic concepts of conservation biology. The scope of conservation biology and levels of biodiversity are explored, as are aspects of tropical ecology related to conservation.

Offered: F15

Instructor: Dr. Doris Audet [daudet@ualberta.ca](mailto:daudet@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

Cross-listed

## **AUENV 354 - Freshwater Ecology and Management**

Introduction to the biological, chemical and physical features of freshwater ecosystems, and how they relate to ecological processes in and adjacent to aquatic systems. The course will examine the role of ecological patterns in lakes, ponds, rivers and streams, with an emphasis on freshwater systems and their management in western Canada.

Offered: F15

Instructor: Dr. Glynnis Hood [ghood@ualberta.ca](mailto:ghood@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

Cross-listed

## **AUENV 355 - Philosophy, Technology, and the Environment**

Investigation of the philosophical and social issues related to technology and the environment. The natural/artificial distinction, different senses of "environment" and the ways we understand, package, and manage nature form the foundation of the course. Issues in environmental ethics are also addressed. Thinkers may include Marx, Heidegger, Marcel, Borgmann, Winner, Singer, Regan, and others.

Offered: F15

Instructor: Dr. Janet Wesselius [jcw3@ualberta.ca](mailto:jcw3@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

Cross-listed

## **AUENV 358 - Environmental Sociology**

Theoretical and empirical examination of the connection between the natural environment and the social world. This involves inquiry into the sociological dimensions of some major contemporary environmental problems, including air, water and soil pollution, decreased biodiversity, deforestation, climate change, and ozone depletion. Particular attention is paid to the social and political connections among issues of industrialization, development, globalization, inequality, gender, social change and environmental destruction.

Offered: F14

Instructor: Dr. Kierstin Hatt [khatt@ualberta.ca](mailto:khatt@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

Cross-listed

## **AUENV 375 - Canadian Environmental History**

Historical examination of the dynamic interrelationships between the natural world and humans, with a focus on Canadian issues within a North American context. Topics and perspectives will include: Aboriginal peoples, colonization, fur trade, exploration, settlement, western agriculture, science, and the conservation movement. Note: Credit may be obtained for only one of AUENV 375, 475, AUHIS 375, 475.

Offered: F15

Instructor: Jeremy Mouat [jmouat@ualberta.ca](mailto:jmouat@ualberta.ca)

Rational: considered a core course for the Certificate in Sustainability

Cross-Listed

## **AUENV 420 - Parks and Wilderness**

Examination of scientific principles and concepts underlying parks, wilderness, and other protected area systems with emphasis on Canada. Topics include history, philosophy, conceptual frameworks, roles in sustainability, and types of biological and geographical designations.

Offered: F15

Instructor: Dr. Glen Hvenegaard [gth@ualberta.ca](mailto:gth@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

Cross-Listed

## **AUENV 421 - Environmental Science: History and Impacts**

Overview of the historical developments, past and current impacts, and changing roles of the field of environmental science.

Offered F14, W16, W17

Instructor: Dr. Glen Hvenegaard [gth@ualberta.ca](mailto:gth@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

Cross-Listed

## **AUENV 425 - Environmental Impact Assessment**

History and theory of environmental impact assessment; legislative and policy frameworks; role in resource planning; methods and techniques for the assessment of impacts; future directions.

Offered: W15, 17

Instructor: Donelda Patriquin [patriqui@ualberta.ca](mailto:patriqui@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

Cross-Listed

## **AUENV 459 - Field Studies in Tropical Ecology and Conservation**

Field course that addresses problems of biodiversity and conservation in tropical environments. The student participates in field workshops, and designs and conducts his or her own field project to answer questions related to ecological and biological conservation.

Offered: W16

Instructor: Dr. Doris Audet [daudet@ualberta.ca](mailto:daudet@ualberta.ca) & Anne McIntosh [amcintos@ualberta.ca](mailto:amcintos@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

Cross-listed

## **AUENV475 - Canadian Environmental History**

Historical examination of the dynamic interrelationships between the natural world and humans, with a focus on Canadian issues within a North American context. Topics and perspectives will include: Aboriginal peoples, colonization, fur trade, exploration, settlement, western agriculture, science, and the conservation movement.

Offered: F15

Instructor: Jeremy Mouat [jmouat@ualberta.ca](mailto:jmouat@ualberta.ca)

Rational: considered a core course for the Certificate in Sustainability

Cross-Listed

Augustana Faculty - Geology (AUGEO):

## **AUGEO 120 - Human Activities and the Natural Environment**

Introductory analysis of the interrelationships between society and the natural world, environmental consequences, and human perceptions. The characteristics and interactions of physical environmental systems and various facets of resource management (including forestry, agriculture, fisheries, protected areas, endangered species, and pollution) are described and analyzed.

Offered: F14, W15, F15, W16

Instructor: Donelda Patriquin [patriqui@ualberta.ca](mailto:patriqui@ualberta.ca)

Rational: considered a core course for the Certificate in Sustainability

## **AUGEO 320 - Parks and Wilderness**

Examination of scientific principles and concepts underlying parks, wilderness and other protected area systems with emphasis on Canada. Topics include history, philosophy, conceptual frameworks, roles in sustainability, and types of biological and geographic designations.

Offered: F15

Instructor: Dr. Glen Hvenegaard [gth@ualberta.ca](mailto:gth@ualberta.ca)

Rational: considered a core course for the Certificate in Sustainability.

Cross-listed

## **AUGEO 324 - Resource and Environmental Management**

Integration of both physical and human phenomena in understanding natural resources, their dimensions and boundaries. Basic concepts in resource analysis and management: the decision-making process, management frameworks and strategies, legislation and regulation, impact assessment, the role of perceptions, attitudes and behavior, and the impact of public participation/interest groups in the development of natural resources.

Offered: W15, F15

Instructor: Donelda Patriquin [patriqui@ualberta.ca](mailto:patriqui@ualberta.ca)

Rational: considered a core course for the Certificate in Sustainability

## **AUGEO 420 - Parks and Wilderness**

Examination of scientific principles and concepts underlying parks, wilderness, and other protected area systems with emphasis on Canada. Topics include history, philosophy, conceptual frameworks, roles in sustainability, and types of biological and geographical designations.

Offered: F15

Instructor: Dr. Glen Hvenegaard [gth@ualberta.ca](mailto:gth@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

**Cross-Listed**

## **AUGEO 421 - Environmental Science: History and Impacts**

Overview of the historical developments, past and current impacts, and changing roles of the field of environmental science.

Offered F14, W16

Instructor: Dr. Glen Hvenegaard [gth@ualberta.ca](mailto:gth@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

**Cross-Listed**



## **AUGEO 425 - Environmental Impact Assessment**

History and theory of environmental impact assessment; legislative and policy frameworks; role in resource planning; methods and techniques for the assessment of impacts; future directions.

Offered: W15

Instructor: Glynnis Hood [ghood@ualberta.ca](mailto:ghood@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

Cross-Listed

Augustana Faculty - History (AUHIS):

## **AUHIS 375 - Canadian Environmental History**

Historical examination of the dynamic interrelationships between the natural world and humans, with a focus on Canadian issues within a North American context. Topics and perspectives will include: Aboriginal peoples, colonization, fur trade, exploration, settlement, western agriculture, science, and the conservation movement.

Offered: F15

Instructor: Jeremy Mouat [jmouat@ualberta.ca](mailto:jmouat@ualberta.ca)

Rational: considered a core course for the Certificate in Sustainability

Cross-Listed

## **AUHIS 475 - Canadian Environmental History**

Historical examination of the dynamic interrelationships between the natural world and humans, with a focus on Canadian issues within a North American context. Topics and perspectives will include: Aboriginal peoples, colonization, fur trade, exploration, settlement, western agriculture, science, and the conservation movement.

Offered: F15

Instructor: Jeremy Mouat [jmouat@ualberta.ca](mailto:jmouat@ualberta.ca)

Rational: considered a core course for the Certificate in Sustainability

Cross-Listed

Augustana Faculty - Philosophy (AUPHI):

## **AUPHI 355 - Philosophy, Technology, and the Environment**

Investigation of the philosophical and social issues related to technology and the environment. The natural/artificial distinction, different senses of "environment" and the ways we understand, package, and manage nature form the foundation of the course. Issues in environmental ethics are also addressed. Thinkers may include Marx, Heidegger, Marcel, Borgmann, Winner, Singer, Regan, and others.

Offered: F15

Instructor: Dr. Janet Wesselius [jcw3@ualberta.ca](mailto:jcw3@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

Cross-listed

Augustana Faculty - Political Studies

## **AUPOL 328 - Environmental Politics**

Examination of contemporary debates in, and the evolution of, environmental policy and politics. This course will focus on Canadian issues in a comparative perspective, exploring topics such as environmental political theory, the policy cycle, social movements, international issues, and related case studies.

Offered: W15, 17

Instructor: Lars Hallstrom [hallstro@ualberta.ca](mailto:hallstro@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

Cross-listed

Augustana Faculty - Psychology (AUPSY):

## **AUPSY 344 - Environmental Psychology**

Systematic study of the dynamic interchange between people and their social and physical environmental contexts. Topics include theories of environmental perception, the effects of crowding, the impact of natural/urban settings, the effects of building design and colors, and managing limited resources.

Offered: F14, 16

Instructor: Sean Moore [semoore@ualberta.ca](mailto:semoore@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

**Cross-listed**

Augustana Faculty - Religion (AUREL)

## **AUREL 345 - Religion and Ecology**

Examination of the relationship between ecology and religion from Christian and non-Christian perspectives. The course looks at ecological spirituality, ecotheology, animal rights, deep ecology, ecoactivism, and ecofeminism. It also devotes substantial time to ecological themes in Asian (Hindu, Buddhist, and Chinese) and traditional (native American and Australian aboriginal) religions.

Offered: F14, W16, W17

Instructor: Joseph Wiebe [jwiebe@ualberta.ca](mailto:jwiebe@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

**Cross-listed**

Augustana Faculty - Sociology (AUSOC):

## **AUSOC 358 - Environmental Sociology**

Theoretical and empirical examination of the connection between the natural environment and the social world. This involves inquiry into the sociological dimensions of some major contemporary environmental problems, including air, water and soil pollution, decreased biodiversity, deforestation, climate change, and ozone depletion. Particular attention is paid to the social and political connections among issues of industrialization, development, globalization, inequality, gender, social change and environmental destruction.

Offered: F14

Instructor: Dr. Kierstin Hatt [khatt@ualberta.ca](mailto:khatt@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

Cross-listed

## **Augustana Faculty - Courses that include Sustainability:**

Augustana Faculty - Biology (AUBIO):

### **AUBIO 334 - Field Studies in Environmental Science and Ecology**

A 3-week field course that provides students an opportunity to develop skills in research and study design in the field of Environmental Science and Ecology. Students will live in a field camp to allow them to fully immerse themselves in their research projects, which could cover the range of ecology, botany, geography, environmental science, and/or environmental studies. Course content also includes instruction in key aspects of conservation biology and resource management.

Offered: Su15

Instructor: Dr. Glen Hvenegaard [gth@ualberta.ca](mailto:gth@ualberta.ca) & Dr. Glynnis Hood [ghood@ualberta.ca](mailto:ghood@ualberta.ca)

Rational: course content closely related to the field of environmental science and sustainability

Augustana Faculty - Crime and Community (AUCRI):

## **AUCRI 453 - Women and the Law**

This course explores historical and contemporary relationships between women and the Canadian legal system. The course uses feminist legal theory to explore the evolution of areas of Canadian law of particular interest to women (for example: reproduction, abortion, family law, rape laws, criminal law) and political activism around the law and women's issues.

Offered: F15

Instructor: Shauna Wilton [swilton@ualberta.ca](mailto:swilton@ualberta.ca)

Rational: implications for social justice and sustainability

Augustana Faculty - English (AUENG):

## **AUENG 206 - Native Children's Literature**

Students in this course will study a diverse body of literature for children and young adults written by North American First Nations authors. The work of leading Native theorists will be included so that analysis of these picture books and novels for young people will be informed by and rooted in Indigenous ways of understanding the world. In crafting a method of reading that is grounded in the traditions and concerns of North American First Nations people, students will attend to the ways in which these texts present the oral tradition, locate themselves in specific tribal territories and cultural practices, connect their narratives to the environment, and re-present Indigenous histories.

Offered: F15

Instructor: Dr. Roxanne Harde [rharde@ualberta.ca](mailto:rharde@ualberta.ca)

Rational: implications for cultural vitality and social sustainability

## **AUENG 269 - The End of the World: Contemporary Apocalyptic Literature**

A study of the contemporary speculative creative writers who consider the end of the world as we know it and the relationship of this literature to a growing body of scientific evidence that warns of global collapse if current damaging human practices are not abated. Consideration will be given to

these works as cautionary tales, thought experiments, and socio-political satire.

Offered: F14

Instructor: Dr. Paul Harland [pharland@ualberta.ca](mailto:pharland@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

Cross-listed

## **AUENG 306 - Native Children's Literature**

Students in this course will study a diverse body of literature for children and young adults written by North American First Nations authors. The work of leading Native theorists will be included so that analysis of these picture books and novels for young people will be informed by and rooted in Indigenous ways of understanding the world. In crafting a method of reading that is grounded in the traditions and concerns of North American First Nations people, students will attend to the ways in which these texts present the oral tradition, locate themselves in specific tribal territories and cultural practices, connect their narratives to the environment, and re-present Indigenous histories.

Offered: F15

Instructor: Dr. Roxanne Harde [rharde@ualberta.ca](mailto:rharde@ualberta.ca)

Rational: implications for cultural vitality and social sustainability

Augustana Faculty - Environmental Studies (AUENV):

## **AUENV 252 - Wildlife Diversity of Alberta**

Ecology, conservation, and identification of Alberta's common wildlife species, with a focus on mammals, birds, amphibians, reptiles, fish, and invertebrates. A mandatory field trip will be included.

Offered: F14, 16

Instructor: Dr. Glen Hvenegaard [gth@ualberta.ca](mailto:gth@ualberta.ca)

Rational: conservation of wildlife diversity is an important aspect of environmental sustainability

## **AUENV 334 - Field Studies in Environmental Science and Ecology**

A 3-week field course that provides students an opportunity to develop skills in research and study design in the field of Environmental Science and Ecology. Students will live in a field camp to allow them to fully immerse themselves in their research projects, which could cover the range of ecology, botany, geography, environmental science and/or environmental studies. Course content also includes instruction in key aspects of conservation biology and resource management.

Offered: Sp15

Instructor: Dr. Glen Hvenegaard [gth@ualberta.ca](mailto:gth@ualberta.ca)

Rational: implications for environmental sustainability

## **AUENV 335 - Wildlife Ecology and Management**

Theory and practices in the study and management of wildlife populations and communities. Population dynamics, habitat assessment and management, conservation challenges, and emerging trends. Computational models and assignments aid theoretical understanding of material.

Offered: W17

Instructor: Dr. Glynnis Hood [ghood@ualberta.ca](mailto:ghood@ualberta.ca)

Rational: considers the various aspects of conservation which are important to environmental sustainability

## **AUENV 350 - Conservation Theory and Biodiversity in Tropical Systems**

Introduction to the basic concepts of conservation biology. The scope of conservation biology and levels of biodiversity are explored, as are aspects of tropical ecology related to conservation.

Offered: F15

Instructor: Dr. Doris Audet [daudet@ualberta.ca](mailto:daudet@ualberta.ca)

Rational: conservation theory has implications for environmental sustainability

## **AUENV 459 - Field Studies in Tropical Ecology and Conservation**

Field course that addresses problems of biodiversity and conservation in tropical environments. The student participates in field workshops, and designs and conducts his or her own field project to answer questions related to ecological and biological conservation.

Offered: W16

Instructor: Dr. Doris Audet [daudet@ualberta.ca](mailto:daudet@ualberta.ca)

Rational: implications for environmental sustainability

Augustana Faculty - Global and Development Studies (AUGDS):

## **AUGDS 427 - Senior Global and Development Studies Research Seminar I\***

Preparation of a literature review, and research proposal, and presentation. Research may be participatory, qualitative, quantitative, archival, community-based, and may include a practical component. Classes will provide supportive and critical analysis throughout students research process and examine issues, theories, and practices central to global and development studies and social change. This course integrates the varied disciplinary approaches and practices experienced throughout the program. Prerequisite: Third or fourth-year standing. Only open to majors in IDS-Global and Development Studies. Note: This course can only be taken by students also registered in AUGDS 428.

Offered: F14

Instructor: Sandra Rein [srein@ualberta.ca](mailto:srein@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

\*Not included for the purposes of STARS credit AC1

Augustana Faculty - Indigenous Studies (AUIND):



## **AUIND 101 - Introduction to Indigenous Studies**

An introduction to the discipline of Indigenous Studies covering indigenous methodologies and theory through the lens of contemporary issues affecting Aboriginal peoples in Canada and attempts to rectify these issues.

Offered: F16

Instructor: Daniel Sims [dc sims@ualberta.ca](mailto:dc sims@ualberta.ca)

Rational: Implications for social sustainability

## **AUIND 201 - Introduction to Indigenous Studies**

An introduction to the discipline of Indigenous Studies covering indigenous methodologies and theory through the lens of contemporary issues affecting Aboriginal peoples in Canada and attempts to rectify these issues.

Offered: F16

Instructor: Daniel Sims [dc sims@ualberta.ca](mailto:dc sims@ualberta.ca)

Rational: Implications for social sustainability

Augustana Faculty - Mathematics (AUMAT):

## **AUMAT 332 - Mathematical Ecology and Dynamical Systems**

Mathematical analysis of problems associated with ecology, including models of population growth (e.g., discrete, continuous, age-structured, limited carrying capacity), the population dynamics of ecosystems, the spread of epidemics, the transport of pollutants, and the sustainable harvesting of vegetation and animal populations. Fundamental concepts of discrete and continuous dynamical systems, both linear and nonlinear.

Offered: F14, W16, F16

Instructor: Peter Berg [pberg@ualberta.ca](mailto:pberg@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

## Augustana Faculty - Physical Education (AUPED):

### **AUPED 184 - Introduction to Outdoor Education**

Opportunity for self-awareness and personal and group leadership development through outdoor tripping and small-group living. The skills associated with backpacking, river canoe tripping, and Leave No Trace camping are developed and practiced. In addition, educational and recreational use of wilderness and wildlands is examined.

Offered: F14, 15, 16

Instructor: Sabrina Andrews [andrews1@ualberta.ca](mailto:andrews1@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

### **AUPED 286 - Outdoor Education and Leadership**

Opportunity for self-awareness and personal and group leadership development through extended outdoor tripping and small-group living. The skills associated with intermediate/advanced backpacking, wilderness navigation, white water canoeing, and Leave No Trace camping are developed and practiced.

Offered: Su16

Instructor: Sabrina Andrews [andrews1@ualberta.ca](mailto:andrews1@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

## Augustana Faculty - Political Studies (AUPOL):

### **AUPOL 329 - Politics and Culture**

Drawing on existing work in the areas of political culture, cultural studies and popular culture, this course explores the relationship and tension between politics and culture in western states, with a focus on Canada.

Offered: W15, 17

Instructor: Shauna Wilton [swilton@ualberta.ca](mailto:swilton@ualberta.ca)

Rational: Implications for social sustainability

## **AUPOL 341 - The Global South and World Politics**

Entry of the non-Western world into international relations, economic and political relations between "North" and "South," and diplomacy in an age of tremendous inequality, cultural diversity, and pressing global problems such as the environment.

Offered: W16

Instructor: Richard Bruneau [rbruneau@ualberta.ca](mailto:rbruneau@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability Implications for social sustainability

## **AUPOL 355 - Gender and Politics**

Exploration of the social and political construction of gender and the impact of gender on politics through an examination of gender with regards to one or more of the following areas: representation, social policy, feminist political thought, international relations, development, and/or globalization.

Offered: W16

Instructor: Shauna Wilton [swilton@ualberta.ca](mailto:swilton@ualberta.ca)

Rational: Implications for social sustainability

Augustana Faculty - Religion (AUREL):

## **AUREL 263 - Spirituality and Globalization**

Critical investigation of the values and views of human nature implicit in the discourse of corporate globalization and of those within the alternative visions of Jesus and the Hebrew prophets.

Offered: F14, 15, 16

Instructor: Craig Wentland [craigw@ualberta.ca](mailto:craigw@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability Implications for social sustainability

Augustana Faculty - Sociology (AUSOC):

## **AUSOC 275 - Sex, Gender, and Society**

Examination of the relation between gender as a social institution and our experiences of sexual identity and gender. The way gender differences are constructed and sustained as part of the reality of everyday life is also examined.

Offered: W16

Instructor: Dr. Kirsten Hatt [khatt@ualberta.ca](mailto:khatt@ualberta.ca)

Rational: Implications for social sustainability

## **AUSOC 341 - Sociology of Food**

This course places food into broader sociocultural context to better understand why we eat what we eat. Topics will include: patterns of food production, distribution and consumption; the role of food in relation to embodiment, identities, culture, class, and gender; the socio-cultural and political-economic organization of local, national, and global food systems; the implication of the food system for health, urban-rural relations, ecological sustainability, and social justice; food as a site of power relations, contestation, and social movements. In sum, this course will offer a sociological perspective of the food system and of engagements for its social transformation.

Offered: W16, 17

Instructor: Dr. Kirsten Hartt [khatt@ualberta.ca](mailto:khatt@ualberta.ca)

Rational: Implications for social sustainability

Alberta School of Business -

# Sustainability Courses:

Accounting (ACCTG):

## **ACCTG 463 Accounting for Natural Resources, Energy, and the Environment**

This course covers accounting rules and practice in the area of natural resources, energy and the environment. Some topics include mineral rights and exploration costs, emissions trading, environmental reporting and liabilities. While it does contain technical material, it is meant for both accounting and non-accounting students. Both International and U.S. generally accepted accounting principles (GAAP) will be explored. The focus will be on understanding how firms in this area report their natural resource assets and related liabilities.

Offered: W15

Instructor: Thomas Schneider [thomas@ualberta.ca](mailto:thomas@ualberta.ca)

Rational: [Syllabus](#), recommended by Elaine Geddes. Considered an elective course for the Certificate in Sustainability. From syllabus W15, this course is “designed to give students an understanding of the accounting standards and practice that exist in the resource and energy sectors, with a significant emphasis on environmental matters”

## **ACCTG 663 - Accounting for Natural Resources, Energy and the Environment**

This course covers accounting rules and practice in the area of natural resources, energy and the environment. Some topics include mineral rights and exploration costs, emissions trading, environmental reporting and liabilities. While it does contain technical material, it is meant for both accounting and non-accounting students. Both International and U.S. generally accepted accounting principles (GAAP) will be explored. The focus will be on understanding how firms in this area report their natural resource assets and related liabilities. Prerequisite: ACCTG 501.

Offered: W15

Instructor: THomas Schneider [thomas@ualberta.ca](mailto:thomas@ualberta.ca)

Rational: [Syllabus](#), recommended by Jayne Ference

**Cross-listed with ACCTG 463**

Business Law (B LAW):

## **B LAW 428 - Natural Resource and Environmental Law**

The legal framework in which managerial decisions affecting the environment are taken. Substance of environmental law and the procedures for enforcing it. Interaction of this legal approach with business strategies for dealing with environmental issues is analyzed.

Offered: W15, F15, W16, F16, W17

Instructor: Will Randall II [randalli@ualberta.ca](mailto:randalli@ualberta.ca)

Rational: [Syllabus](#), recommended by Elaine Geddes. Considered an elective course for the Certificate in Sustainability.

## **B LAW 628 - Natural Resource and Environmental Law**

The course considers the legal framework in which managerial decisions affecting the environment are taken. It looks at the substances of environmental law and the procedures for enforcing it. The interaction of this legal approach with business strategies for dealing with environmental issues is analyzed.

Offered: F14, Su15, F15, F16

Instructor: Stanley Rutwind [srutwind@ualberta.ca](mailto:srutwind@ualberta.ca)

Rational: [Syllabus](#), recommended by Jayne Ference

Cross-listed with B LAW 428

Business Economics (BUEC):

## **BUEC 463 - Energy and the Environment: Industry Structure, Performance and Challenges**

Uses the basic tools of business economics in order to gain a better understanding of energy markets and industries. Differences and similarities between specific industries (oil, gas, electricity, etc.) and between different industry segments (exploration, production, retail, etc.) are highlighted. New challenges faced by the industry, most notably environmental concerns, but also globalization and new forms of competition, are analyzed with respect to the impacts that they have had and

might have in the future on firms' strategies and on market performance.

Offered: F14 (2), 15, W16 (2), F16, W17

Instructor: Carmen Velasquez [cvelasqu@ualberta.ca](mailto:cvelasqu@ualberta.ca)

Rational: [Syllabus](#), recommended by Elaine Geddes. Considered an elective course for the Certificate in Sustainability.

## **BUEC 464 - Environmental Management**

Introduction to the theory and application of environmental economics and its role in management and policy-making. The course will cover development of a model of pollution control, evaluation of policy in this context, the setting of optimal environmental policies, and the application of these policies. Particular policies and practices implemented in North America will be examined.

Offered: F14, 15, 16

Instructor: Branko Boskovic [boskovic@ualberta.ca](mailto:boskovic@ualberta.ca)

Rational: [Syllabus](#), recommended by Elaine Geddes, considered a core course for the Certificate in Sustainability

## **BUEC 564 - Environmental Management**

The economic theory of externalities is introduced and applied in a discussion of alternative policy instruments such as taxes, tradable permits, and regulatory standards which are used to deal with pollution. Topics include current environmental regulation issues such as climate change, water and air pollution and firm strategy. Extensions include an introduction to cost-benefit analysis and environmental impact assessment tools for project evaluation as well as a discussion of the economics of non-renewable resources.

Offered: F14 (2), Sp15, F15 (2), F16 (2)

Instructor: Branko Bosovich [boskovic@ualberta.ca](mailto:boskovic@ualberta.ca)

Rational: [Syllabus](#), recommended by Jayne Ference

**Cross-listed with BUEC 464**

Business (BUS):

## **BUS 505 - Ethics and Corporate Social Responsibility with Communications**

This course focuses on the application of moral principles and models for ethical decision making to individuals and businesses in the 21st century. Contemporary ethical and social issues will be examined through the use of case studies, class discussions and presentations. Topics include concepts of individual ethics, workplace issues, corporate compliance and social and environmental responsibility. While examining ethical issues, emphasis will be placed on improving students' proficiency levels in verbal and written business communication.

Offered: F14, W15 (2), Sp15, F15, W16 (2), Su16, F16, W17 (3)

Instructor: Michelle Inness [minness@ualberta.ca](mailto:minness@ualberta.ca)

Rational: [Syllabus](#), recommended by Jayne Ference. From syllabus, key learning outcomes are “ethical and global awareness” and focus of the course is on “application of moral principles and models for ethical decision making” which has implications for social, environmental, and economic sustainability.

### Marketing (MARK):

## **MARK 455 - Sustainability and Responsible Marketing**

Marketing plays a large role in and is affected by corporate social responsibility (CSR) and sustainability issues. This course will explore, examine and inform how the marketing function of business activity engages in CSR and sustainability issues. Specific topics will cover how these issues are influenced by consumer trends and how they are communicated to consumers. Marketing problems found in the non-profit, for-profit and public sectors will be examined, and responsible (and irresponsible) marketing practices will be explored.

Offered: F14, W15, F15, W16, W17

Instructor: Leo Wong [ltwong@ualberta.ca](mailto:ltwong@ualberta.ca)

Rational: [Syllabus](#), recommended by Elaine Geddes, considered a core course for the Certificate in Sustainability

## **MARK 655 - Sustainability and Responsible Marketing**

Marketing plays a large role in and is affected by corporate social responsibility (CSR) and



sustainability issues. This course will explore, examine and inform how the marketing function of business activity engages in CSR and sustainability issues. Specific topics will cover how these issues are influenced by consumer trends and how they are communicated to consumers. Marketing problems found in the non-profit, for-profit and public sectors will be examined, and responsible (and irresponsible) marketing practices will be explored.

Offered: F14, W15, F15, W16, W17

Instructor: Leo Wong [ltwong@ualberta.ca](mailto:ltwong@ualberta.ca)

Rational: [Syllabus](#), recommended by Jayne Ference

Cross-listed with MARK 455

## Strategic Management and Organization (SMO):

### **SMO 406 - Ethical Issues in Business**

This course assists students in developing and refining their personal ethical frameworks by examining issues commonly facing members of business and government organizations. A wide range of issues will be explored including discrimination, product and worker safety, environmental impacts, insider trading, and employee privacy and rights.

Offered: F14, 15, 16

Instructor: Ross Bradford [rbradfor@ualberta.ca](mailto:rbradfor@ualberta.ca)

Rational: [Syllabus](#), recommended by Elaine Geddes. Considered an elective course for the Certificate in Sustainability. From syllabus F15, the intent of the course is to “make the study of ethics relevant to real-life work situations”.

### **SMO 423 - Power and Organization**

An introduction to aspects of organizational life often omitted in business courses - the role of humor, gossip, emotion and sex; the organization of time and space; the nature of the body and the construction of organizational identities - and consider their significance for understanding contemporary organizational and human resources practices.

Offered: Sp15, 16

Instructor: Stanley Thomson [sbthomso@ualberta.ca](mailto:sbthomso@ualberta.ca)

Rational: [Syllabus](#), from syllabus (sp15): “Very broadly, the course examines the larger

context of power at work” including “the role of gossip, humor and emotion at work; sex, power and conflict; the nature and construction of the body at work; and the construction of identity and of the ‘ideal worker” all of which has implications for power and social sustainability by examining business structure through a critical lens.

## **SMO 445 - Corporate Social Responsibility and Social Entrepreneurship**

Corporate social and environmental responsibility is an important strategic consideration for companies around the world. The relationship a business has with both government and the larger public is integral to its success, reputation, and day-to-day activities. This course offers a practical introduction to social entrepreneurship and addresses entrepreneurship, innovation, and corporate social responsibility. The course focuses on key concepts in the field of social entrepreneurship and social enterprise, including organizational learning, sustainability, philanthropy, commercialization, and profit and nonprofit development. It also presents cases that illustrate these concepts in practical contexts. Ideas and skills learned in this course will better enable students to: play a role in shaping socially responsible businesses; develop a genuinely sustainable business enterprise; infuse non-profit organizations with a spirit of social innovation and practical financial sustainability; assist in influencing future government actions. Open to third and fourth year students.

Offered: W17 (2)

Instructor: Madeline Toubiana [toubiana@ualberta.ca](mailto:toubiana@ualberta.ca)

Rational: recommended by Elaine Geddes

## **SMO 488 - Selected Topics in Organization Theory- Corporate Sustainability/Social Entrepreneurship/Innovation and Sustainability\***

Normally restricted to third- and fourth-year Business students.

Rational: considered a core course for the Certificate in Sustainability when the topic is Corporate Sustainability and considered an elective course when the topic is Social Entrepreneurship or Innovation and Sustainability

\*Not included for the purposes of STARS credit AC1

## **SMO 601 - Innovation and Sustainability: The Cleantech Revolution**

The clean technology and renewables course is a course designed to fit with three areas of graduate study: technology development and transfer, strategy, and sustainability. In this course, we will begin with an examination renewable energy industries (solar, water, wind, etc.) and clean technologies focused on waste and recycling. Clean and green strategies will be identified and discussed, using specific examples from our international clean technology research and database. At the end of the course, students will present either a project with a local clean technology company project or a case analysis of a key clean technology company of interest.

Offered: Sp15, 16

Instructor: P Jennings [dj1@ualberta.ca](mailto:dj1@ualberta.ca)

Rational: recommended by Jayne Ference

## **SMO 638 - Corporate Sustainability**

This course examines business strategies for sustainable development. Business sustainability is defined as managing the "triple bottom line" - designing mission driven enterprises that provide a thriving future for business, society and the planet. To achieve this, managers must adopt a fresh understanding of the role of the business enterprise. The course will draw from successful sustainability efforts of leading business organizations, both locally and internationally, by identifying key success factors that encourage sustainable business practices. It will also place current understandings of sustainability in a wider context by exploring the historical roots of current sustainability practices and examining their implications for key stakeholders of the business enterprise.

Offered: F14, W15, W16, F16 (2), W17

Instructor: Joel Gehman [jgehman@ualberta.ca](mailto:jgehman@ualberta.ca)

Rational: [Syllabus](#), recommended by Jayne Ference

## **SMO 645 - Social Entrepreneurship**

Corporate social and environmental responsibility is an important strategic consideration for companies around the world. The relationship a business has with both government and the larger public is integral to its success, reputation, and day-to-day activities. This course offers a practical introduction to social entrepreneurship and addresses entrepreneurship, innovation, and corporate

social responsibility. The course focuses on key concepts in the field of social entrepreneurship and social enterprise, including organizational learning, sustainability, philanthropy, commercialization, and profit and nonprofit development. It also presents cases that illustrate these concepts in practical contexts. Ideas and skills learned in this course will better enable students to; play a role in shaping socially responsible businesses; develop a genuinely sustainable business enterprise; infuse non-profit organizations with a spirit of social innovation and practical financial sustainability; assist in influencing future government actions.

Offered: W15, 16, 17 (2)

Instructor: Syed Omar Yaqub [yaqub@ualberta.ca](mailto:yaqub@ualberta.ca)

Rational: [Syllabus](#), recommended by Jayne Ference

## Alberta School of Business - Course that include Sustainability: Business Economics (BUEC):

### **BUEC 363 - Introduction to Energy and Resource Industries**

Introduces students to the current Canadian and global energy landscape, key energy industries, regulations, and commodities markets. Examines oil sands, conventional oil sectors, refined products such as gasoline, renewable fuels, natural gas including shale gas, and electricity. Students will also be introduced to environmental issues such as climate change, water, and land use. Students will use economic models of energy demand and supply to determine the environmental and economic advantages/shortcomings of these models in their application to real-world issues, both within Alberta and internationally, and will learn how economics can be used to guide energy policy. Not to be taken by students with credit in BUEC 463.

Offered: W15 (2), 16 (2), 17 (2)

Instructor: Hailing Zang [hailing@ualberta.ca](mailto:hailing@ualberta.ca)

Rational: [Syllabus](#), recommended by Elaine Geddes. One unit of the course discusses “environmental policies and regulations that help minimize the environmental impact of industries”

## **BUEC 563 - Energy Industries and Markets**

This course provides a broad introduction to the energy industries and markets, focusing on market structure, firm strategy and behavior, regulation and public policy. The evolving nature of industries and markets, including technological challenges, environmental constraints and globalization, are discussed. The course includes a number of site visits and guest speakers.

Offered: F14, W15 (2), F15, W16, F16, W17

Instructor: Andrew Leach [aleach@ualberta.ca](mailto:aleach@ualberta.ca)

Rational: [Syllabus](#), from syllabus W16: several units of the course discuss the impacts of various GHG policies

## **BUEC 663 - Natural Resources and Energy Capstone**

A project-focused course dealing with international market, business and policy issues and challenges in the energy, environment and natural resources sectors. A course designed around an international trip with a focus on knowledge integration and application to international markets through an intense set of visits with firms, organizations and government agencies. The specific content including the location of the trip and issues addressed changes from year to year. The course involves both teamwork and individual research. In exceptional circumstances students can complete an additional project if they are unable to complete the travel component of the course. The course is open only to students registered in the NREE specialization in the final year of the MBA program. Prerequisites: Completion of all core and NREE required courses, or permission from the program office.

Offered: W15

Instructor: Emilson Silva [emilson@ualberta.ca](mailto:emilson@ualberta.ca)

Rational: from [Syllabus](#) (W15): "The course provides an opportunity to develop a better and deeper understanding of international aspects of energy/resource markets and environmental issues, particularly Brazilian issues."

Finance (FIN):

## **FIN 436 - Investment Management**

This course provides students with experience managing an institutional asset portfolio, the PRIME FUND. Students interact with investment professionals in making asset acquisition and

divestiture decisions within the institutional framework of the fund. This course draws on and unifies skills related to investment analysis and portfolio theory. It combines traditional academic objectives with the practical demands of hands-on investment analysis and portfolio management. The students learn by actually using the tools of the trade. These include printed materials, real-time computerized sources of information and, most importantly, access to practicing analysts and managers. Students also learn about the differences between institutional and personal investment decisions, the mechanics of trading, the different providers of trading services, and cash management.

Offered: W15, 16, 17

Instructor: Gary Smith [grs3@ualberta.ca](mailto:grs3@ualberta.ca)

Rational: Recommended by Elaine Geddes

## Strategic Management and Organization (SMO):

### **SMO 200 - Introduction to Management for Non-Business Students**

Provides an understanding of the behavior of individuals and groups within the context of the business organization. Topics covered include organizational structure, culture, individual differences, personality, motivation, leadership, groups, decision making, power, politics, conflict, careers, stress, and organizational change.

Offered: Sp15, Sp16

Instructor: Dr. Richard Field [rfield@ualberta.ca](mailto:rfield@ualberta.ca)

Rational: [Syllabus](#), recommended by Elaine Geddes. From syllabus, key learning outcomes include developing business ethical and global awareness for non-business students

### **SMO 310 - Introduction to Management**

Introduces students to the behavioral, political and organizational dynamics of managerial practice. Topics include management theory, **social responsibility, ethics**, motivation, decision making, leadership, organizational structure, and strategy.

Offered: W15 (8), W16 (8), F16, W17 (8)

Instructor: Christopher Steele [csteele1@ualberta.ca](mailto:csteele1@ualberta.ca)

Rational: [Syllabus](#), recommended by Elaine Geddes

## **SMO 433 - Managing Organizational Change**

This course examines organization change, e.g. how organizations make transitions from one state to another. There is also a focus on understanding how management goes about changing corporate culture, organization structure and management systems.

Offered: W15, 16, 17

Instructor: Dr. Robert Gephart [rgephart@ualberta.ca](mailto:rgephart@ualberta.ca)

Rational: [Syllabus](#), recommended by Elaine Geddes. From syllabus W16, one learning outcome of the course is to “learn the basics of the socio-economic approach to management” which is related to social and economic sustainability.

## **SMO 441 - Business Strategy**

This course examines top management decisions and emphasizes the development of business and corporate strategy. It integrates the management principles studied in the business core using a series of business cases. Guest Faculty members and executives will participate.

Offered: F14 (2), W15 (2), F15 (2), W16 (2), F16 (2), W17 (2)

Instructor: Christopher Steele [csteele1@ualberta.ca](mailto:csteele1@ualberta.ca)

Rational: [Syllabus](#), recommended by Elaine Geddes. From syllabus W16, on learning outcome of the course is to “learn basic values, practices, and concepts associated with the socio-economic approach to management”

## **SMO 635 - Managing International Enterprises**

International enterprises are for-profit businesses and nonprofit organizations which actively coordinate their operations sited in multiple countries. Top managers of international enterprises must ensure that their organizations simultaneously adapt to differences in external contexts around the world and increase internal coordination, efficiency, and innovation on a worldwide basis. Students will be put in the role of practicing top managers who are facing challenges, making decisions, and providing leadership in complex, multicultural contexts. Topics may include: entry decisions; aligning strategy, structure, and process; globalization; international strategic

alliances; and sustainability.

Offered: F14, 15, 16

Instructor: Dr. David Deephouse [davidd@ualberta.ca](mailto:davidd@ualberta.ca)

Rational: [Syllabus](#), recommended by Jayne Ference

## **SMO 686 - Selected Topics in Behavioral Sciences - Women and Leadership\***

Topics may vary from year to year. No course description

Offered: S15

Instructor: Dr. Karen Hughes [khughes@ualberta.ca](mailto:khughes@ualberta.ca)

Rational: [Syllabus](#), recommended by Jayne Ference. Focus of the course is on examining women in leadership, including gendered barriers which prevent women from assuming leadership roles, which has implications for equality and social sustainability.

\*Not included for the purposes of STARS credit AC1

## **Faculty of Education - Sustainability Courses:**

Education - Policy Studies (EDPS):

### **ED PS 360 - Society and Education**

The changing function and structures of education, with special reference to contemporary Canadian society.

Offered: F14 (2), W15 (2), Sp15, F15 (4), W16 (2), Sp16, F16 (2), W17



Instructor: Dr. Makere Stewart-Harawira [makere@ualberta.ca](mailto:makere@ualberta.ca)

Rational: considered a core course for the Certificate in Sustainability

## ED PS 411 - Cross Cultural Studies in Education

This course is an ethnographic study of the interrelatedness of educational and cultural practices and how they affect different social groups in Canadian and global contexts. It considers how cultural politics affect schooling, its outcomes, and the range of educational opportunities for different students in relation to their ethnocultural backgrounds. Examining both the historical and contemporary dynamics of schooling, the course examines how the schooling-larger culture interaction shapes the social, political, and economics dimensions of students' lives.

Offered: F14, 15, 16

Instructor: Prof Dia Da Costa [ddacosta@ualberta.ca](mailto:ddacosta@ualberta.ca)

Rational: considered a core course for the Certificate in Sustainability. This course takes an intersectional approach to the “social, political, and economic dimensions” that affect students.

## ED PS 425 - Global Education: Issues and Strategies for Teachers

This course explores, in theory and practice, how global education in schools can facilitate critical understanding and develop skills and values for building more peaceful futures in local, national, and global contexts. It draws on North and South scholars and educators to clarify underlying conceptual and pedagogical principles of global education and related fields (education for peace, justice, development, human rights, cultural solidarity, environmental care). Exemplars of creative curriculum content and teaching-learning strategies for global literacy will be included.

Offered: F14, 15, 16

Instructor: Dr. Dip Kapoor [dkapoor@ualberta.ca](mailto:dkapoor@ualberta.ca)

Rational: considered a core course for the Certificate in Sustainability

## EDPS 528 - Global Transformations, Indigenous

## **Knowledge and the Crisis of Sustainability**

This course examines the intersection of Indigenous peoples, Indigenous traditional and contemporary knowledge and global transformations in the early 21st century. Central to the course are changes to the conceptualization of education and knowledge and the contested nature and role of Indigenous knowledge and politics. In this context the course has particular regard to what has been designated as the 'triple crisis of sustainability'. This course is open to all graduate students.

Offered: W15

Instructor: Dr. Makere Stewart-Harawira [makere@ualberta.ca](mailto:makere@ualberta.ca)

Education (EDU):

## **EDU 211 - Aboriginal Education and Contexts for Professional and Personal Engagement**

In this course, preservice teachers will continue to develop knowledge of Aboriginal peoples' histories, educational experiences, and knowledge systems, ways of knowing and being and will further develop an understanding of the implications of this knowledge to the professional roles and obligations for teachers. Students will engage in a learning process of self-and-other awareness, and will be supported by Indigenous educators, Faculty members and Elders.

Offered: F14 (2), W15 (2), Sp15, F15 (4), W16 (2), Sp16, F16 (5), W17 (3)

Instructor: Dr. Cora Weber-Pillwax [ckw@ualberta.ca](mailto:ckw@ualberta.ca)

Rational: considered a core course for the Certificate in Sustainability. Mandatory aboriginal education class for all Education students

## **Faculty of Education - Courses that include Sustainability:**

Education - Elementary (EDEL):

## **EDEL 460 - Sustaining Language and Culture through**

## Traditional Knowledge and Practices

This course examines approaches to Indigenous language and culture revitalization and their application to everyday life. Topics include traditional worldviews, the life cycle, rites of passage, community feasts, cultural celebrations, and festivals (but nothing of a sacred nature). The aim of this course is to create awareness about strategies Indigenous people are taking to sustain, preserve, and protect traditional practices. Elders serve as resources in the class.

Offered: Su16

Instructor: Dr Heather Blair [hblair@ualberta.ca](mailto:hblair@ualberta.ca) & Linda Pelly-Landrie [lindap@ualberta.ca](mailto:lindap@ualberta.ca)

Rational: implication for cultural vitality

## EDEL 535 - Socio-cultural Aspects of Second Language Learning and Teaching

The course examines research on social and cultural aspects of second language acquisition and explores the relevance of this research for second-language teaching practice.

Offered: W16

Instructor: Dr. Joe Wu [jwu@ualberta.ca](mailto:jwu@ualberta.ca)

Rational:

Education - Policy Studies (EDPS):

## ED PS 422 - International Development Education

This course examines the interplay of education and international development in diverse contexts of our world. Theoretical analysis and discussions will focus on different types of education, the histories of international development and globalization, as well as citizenship, **social justice and human rights education**. These topical foci will be complemented by specialized regional perspectives on the state of education and social development in Africa, Asia, Latin America, Eastern Europe, the Caribbean region and Oceania.

Offered: W15, 16, 17

Instructor: Prof Dia Da Costa [ddacosta@ualberta.ca](mailto:ddacosta@ualberta.ca)

Rational: considered a core course for the Certificate in Sustainability

## **EDPS 456 - The Philosophy of Moral Education**

An examination of the philosophical problems that arise in the moral education of students. Students may not receive credit for both EDPS 456 and EDFN 456.

Offered: F14, 15, 16

Instructor: Dr. Makere Stewart-Harawira [makere@ualberta.ca](mailto:makere@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

## **EDPS 514 - Gender Issues in Educational Administration**

This course explores the ways in which concepts of gender, leadership, and organizations intersect in the practices of administrators in educational settings. Using gender as an analytical perspective, the course provides an overview of the ways in which **feminist and gender-based research challenges traditional theories about leadership in educational organizations**. Topics for discussion and re-conceptualization include bureaucracy, power and authority, concepts and locations of leadership, administrative styles and ethics, and current educational policy as they inform practice for gendered subjects in educational settings. The implications of a gendered analysis for the work of educational administrators will be explored.

Offered: F14

Instructor: Janice Wallace [wallacej@ualberta.ca](mailto:wallacej@ualberta.ca)

Rational: course takes a critical lens to analyze the field of educational administration in order to rectify issues which are relevant to social sustainability.

## **EDPS 520 - Adult Education, Popular Movements and NGOs in the Global South**

This course will examine the role and nature of adult education and learning processes in social change initiatives being undertaken by development non-governmental organizations (NGOs) and by popular subaltern social movements of pastoralists, peasants, indigenous peoples, rural women and urban poor (shack dwellers) social groups in Asia, Africa, Latin America and the Caribbean (Global South). These initiatives will be explored in terms of a critical contextual

appreciation of the inter/national development project and neoliberal globalization.

Offered: W15, 17

Instructor: Dr. Dip Kapoor [dkapoor@ualberta.ca](mailto:dkapoor@ualberta.ca)

Rational: implications for social justice and sustainability

## **EDPS 525 - Globalization, Global Education and Change**

This course will develop a critical understanding of select perspectives on globalization and the associated implications for: (a) formal, non-formal and informal education in local, national, and international contexts; and (b) pedagogical possibilities for critical global education in schools and communities addressing global issues pertaining to international development (poverty and inequality in North-South trajectories), ecology, human rights and improved prospects for peace.

Offered: W16

Instructor: Dr. Makere Stewart-Harawira [makere@ualberta.ca](mailto:makere@ualberta.ca)

Rational: Implications for social sustainability

## **EDPS 539 - Revitalizing Indigenous Language**

Course studies the impact of the loss of Indigenous languages and strategies, policies and practices aimed at the revival and maintenance of Indigenous languages locally and internationally.

Offered: F15, 16

Instructor: Dr. Cora Weber-Pillwax [ckw@ualberta.ca](mailto:ckw@ualberta.ca)

Rational: implications for cultural vitality and social sustainability

## **EDPS 547 - Leadership and Social Justice**

This course explores theoretical frameworks of social justice and practical experiences of social justice issues in schools, higher education institutions, and their communities. Students will critically examine concepts of social justice, exclusion, and inclusive education from the

perspective of the educational leader as part of a wider educational community.

Offered: W16

Instructor: Dr. Lynette Shultz [lshultz@ualberta.ca](mailto:lshultz@ualberta.ca)

Rational: Implications for social sustainability

Education - Psychology (EDPY):

### **EDPY 301 - Introduction to Inclusive Education: Adapting Classroom Instruction for Students with Special Needs**

This course provides an introduction to teaching students with diverse learning support needs within the inclusive education context. Course content focuses on adapting classroom instruction and classroom environments to enhance learning for all students.

Offered: F14 (4), W15 (6), Sp15 (2), F15 (6), W16 (3), Sp16 (2), F16 (9), W17 (4)

Instructor: Amy Thomas [athomas2@ualberta.ca](mailto:athomas2@ualberta.ca)

Rational: implications for accessibility and social justice

Education - Secondary (EDSE):

### **EDSE 307 - Language, Literacy and Society in Educational Contexts**

No course description available

Offered: F14 (2), W15 (2), F15 (2), W16 (2), F16 (2), W17 (2)

Instructor: Dr. Jason Wallin [jjwallin@ualberta.ca](mailto:jjwallin@ualberta.ca)

Rational: Course “designed to prepare teachers to develop English language and literacy abilities...particularly diverse and minority learners” has implications for social sustainability

Education (EDU):

## **EDU 100 - Contexts of Education**

This course focuses on the different contexts of professional practice within education. It critically examines the complex social relationships among educators as professionals and learners as participants in educational institutions. Teacher identity will be explored as a dynamic, reformative process in response to competing tensions that require an awareness of the positionality of educators. Preservice teachers will learn about the relationships between education and practice that are nested in social relations of learning that are also economic, political, and cultural. Engagement from a variety of perspectives they will develop professional knowledge for critical reconstructive practice.

Offered: F14 (5), W15 (3), Sp15 (2), Su15, F15 (6), W16 (4), Sp16 (2), Su16, F16 (10), W17 (6)

Instructor: Sandra Irving [baskett@ualberta.ca](mailto:baskett@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability. Considers the contexts that education professionals exist in from a economic, political, and cultural perspective which has implications for social and economic sustainability

Library and Information Studies (LIS):

## **LIS 592 - Intellectual Freedom and Social Responsibility in Librarianship**

An examination of the central concepts of intellectual freedom and social responsibility and the range of related issues impacting librarians, library institutions, and library associations. Sections may be offered in a Cost Recovery format at an increased rate of fee assessment; refer to the Fees Payment Guide in the University Regulations and Information for Students. Prerequisite: LIS 501 or consent of instructor.

Offered: W16, F16

Instructor: Elizabeth Buchanan [ebuchana@ualberta.ca](mailto:ebuchana@ualberta.ca)

Rational: Course focuses on the social responsibility of the librarian, and examines the issue from several dimensions which have implications for social sustainability. From [Course Outline](#): “upon successful completion of this course, students will be able to consider theoretical frameworks for examining the library as a part of a larger network of cultural production, regulation and ideology and the roles that intellectual freedom and social responsibility play therein; and analyze how the library and information studies discourse on intellectual freedom and social responsibility interplay with other discourses...”

# Faculty of Engineering - Sustainability Courses:

Civil Engineering (CIV E):

## **CIV E 221 - Environmental Engineering Fundamentals**

Basic mechanisms of chemistry, biology, and physics relevant to environmental engineering processes. Principles of equilibrium reactions and kinetics, mass transfer and material balances, microbial growth and kinetics, water, energy, and nutrient cycles. Applications to environmental engineering systems as biological degradation, mass and energy movement through the environment, and design of water and wastewater treatment systems.

Offered: W15, 16, 17

Instructor: Dr. Yang Liu [liu14@ualberta.ca](mailto:liu14@ualberta.ca)

## **CIV E 657 - Air Pollution Control**

Overview of air quality regulations. Overview of fundamental principles in air quality engineering. Theory and application of processes for gaseous and particulate pollutants control, including incineration, adsorption, EC absorption, biofiltration, cyclonic separation, electrostatic precipitation, filtration, and scrubbing. Special applications may include the control of sulfur dioxide, nitrogen oxides, volatile organic compounds, and mobile/automotive emissions.

Offered: W16, 17

Instructor: Dr. Zaher Hashisho [hashisho@ualberta.ca](mailto:hashisho@ualberta.ca)

## **CIV E 729 - Advanced Topics in Environmental Engineering\***

There is no description available for this course.



\*Not included for the purposes of STARS credit AC1

## Electrical and Computer Engineering (ECE):

### **ECE 635 - Power Converters and Renewable Energy Systems**

This course covers: power converter topologies (including DC-DC converters, DC-AC converters, two level and multilevel converters, voltage source converters, current source converters). PWM methods (including Sine PWM, Space Vector PWM, Hysteresis PWM, Selective Harmonic Elimination PWM, and PWM for multilevel converters) and implementation techniques. Wind power systems, PV systems, fuel cell systems and the power converters used in these systems. Operation/control issues of renewable energy systems.

Offered: F14, 15,

Instructor: Ryan (Yunwei) Li [yunwei1@ualberta.ca](mailto:yunwei1@ualberta.ca)

Rational: course specifically focuses on the application of electrical engineering to renewable energy technology

## Engineering Management (ENG M):

### **ENG M 508 - Energy Auditing and Management**

Concepts and value of energy management and conservation. Methodologies for energy management in energy intensive systems in various industries. Energy auditing methods and implementation. Energy accounting and economic analysis. Energy audits and maintenance. Exposure to software for energy auditing.

Offered: F14, 15, 16

Instructor: Dr. Amit Kumar [amitk@ualberta.ca](mailto:amitk@ualberta.ca)

Rational: Recommended by Linda Paulic

## Environmental Engineering (ENV E):

## **ENV E 302 - Environmental Impact Assessment**

Need and objectives of environmental impact assessment (EIA). Basic tasks and methods for need justification, project description, environmental factor determination, impact prediction, significance testing, mitigation design, evaluation, reporting, and public review. Review of impacts of different types of engineering projects and activities.

Offered: W15 16 17

Instructor: Dr. Zaher Hashisho [hashisho@ualberta.ca](mailto:hashisho@ualberta.ca)

## **ENV E 322 - Environmental Protection**

Principles and methods of environmental and public health protection for the engineering profession. Assessment of behavior of pollutants in the environment, framework for environmental health risk management and standards in practice such as federal and provincial environment legislation. Environmental policies and their effects on engineering design. Environmental management plans and issues.

Offered: F14, 15, 16

Instructor: Dr. Ania Ulrich [aulrich@ualberta.ca](mailto:aulrich@ualberta.ca)

## **ENV E 324 - Biological Processes**

The principles and applications of biological processes in the treatment of contaminated environmental media, with a focus on wastewater treatment. Includes knowledge of environmental microbiology necessary to understand biological processes.

Offered: F14, 15, 16

Instructor: Dr. Yang Liu [liu14@ualberta.ca](mailto:liu14@ualberta.ca)

Mechanical Engineering (MEC):

## **MEC E643 - Renewable Energy Engineering and**

## **Sustainability**

Principles of renewable energy systems such as solar, wind, tidal, biomass, geothermal, and fuel cells. Environmental aspects of implementation of renewable energy e.g. hydro and nuclear energy sources. Energy conservation and conventional fossil fuel sources. New technologies and trends in renewable energy. Concept of sustainability and sustainable design for energy systems. Elementary economics of implementation of renewable energy sources and related policy and social issues. Prerequisites: consent of instructor.

Offered: F14, 15, 16

Instructor: Dr. Amit Kumar [amitk@ualberta.ca](mailto:amitk@ualberta.ca)

Rational: Recommended by Linda Paulic

### Mining Engineering (MIN E):

## **MIN E 422 - Environmental Impact of Mining Activities**

Environmental impact of mining projects and activities. Topics include: environmental impact assessment (EIA) processes, sustainable development, mine closure, reclamation planning, social responsibility of mining, regulations, guidelines, surface subsidence, tailings disposal, erosion and acid rock drainage. Corequisite: MIN E 413.

Offered: W15, 16, 17

Instructor: Gordon Wilson [wwilson2@ualberta.ca](mailto:wwilson2@ualberta.ca)

## Faculty of Engineering - Courses that include Sustainability:

### Chemical Engineering (CH E):

## **CH E 464 - Chemical Engineering Design I**

Engineering design concepts; cost estimation; project planning and scheduling; plant safety and

hazards analysis; selected project design examples.

Offered: F14, W15, F15, W16, F16, W17

Instructor: Marnie Jameson [mvjamies@ualberta.ca](mailto:mvjamies@ualberta.ca) & Bruce Peachy [bpeachey@ualberta.ca](mailto:bpeachey@ualberta.ca)

Rational: Dr. Arvind Rajendran recommended this course as including sustainability. He specified that "Sustainability is also embedded in most of what we do as chemical and materials engineers where we are constantly looking for new technologies and processes that enable sustainable use of our resources" and identified these courses as part of the "curriculum and research [that is] geared to meet those objectives".

## CH E 465 - Chemical Engineering Design II

Integration of chemical engineering practice, theory and economics into capital project proposal, sustainable design and evaluation. Course work requires pre-session preparation, team and project work.

Offered: W15, 16, 17

Instructor: Marnie Jameson [mvjamies@ualberta.ca](mailto:mvjamies@ualberta.ca) & Frank Vagi [vagi@ualberta.ca](mailto:vagi@ualberta.ca)

Rational: Dr. Arvind Rajendran recommended this course as including sustainability. He specified that "Sustainability is also embedded in most of what we do as chemical and materials engineers where we are constantly looking for new technologies and processes that enable sustainable use of our resources" and identified these courses as part of the "curriculum and research [that is] geared to meet those objectives".

Civil Engineering (CIV E):

## CIV E321 - Principles of Environmental Modeling and Risk

Introduction modeling environmental processes to predict the movement of water and fate of contaminants in the hydrologic cycle. Principles of mass transfer, conservation of mass, environmental transformations, nutrient enrichment and depletion are developed. Introduction to storm events, rainfall, runoff, stream discharge and storm water management. Applications of modeling results to the quantification of risk using examples from hydrology, water pollution and health protection and development of environmental regulations. Prerequisite: CIV E 221. Corequisite: CIV E 330.

Offered: W15, 16, 17

Instructor: Dr. TY Gan [tgan@ualberta.ca](mailto:tgan@ualberta.ca)

## **CIV E429 - Environmental Engineering Design**

Fundamentals of municipal planning and design of water supply, water and wastewater treatment, storm water management, or wastewater collection and management systems. Course includes design projects, field trips, and presentations. Students work in teams on a design project.

Offered: W15, 16, 17

Instructor: Dr. Tong Yu [tongyu@ualberta.ca](mailto:tongyu@ualberta.ca)

## **CIV E 431 - Water Resources Engineering**

Hydrotechnical analysis, including: advanced open channel hydraulics; advanced surface water hydrology; groundwater and well hydraulics; and environmental hydraulics.

Offered: F14, 15, 16

Instructor: Dr. Yuntong She [yshe@ualberta.ca](mailto:yshe@ualberta.ca)

Rational: environmental hydraulics and implications for environmental sustainability and the sustainable use of water resources

## **CIV E 439 - Water Resources Engineering Design**

Design of hydraulic structures and river engineering works, including: dams, spillways, energy dissipaters, bridges, culverts, erosion protection and river training works. Students work in teams on a design project.

Offered: W15, 16, 17

Instructor: Dr. Mark Loewen [mrloewen@ualberta.ca](mailto:mrloewen@ualberta.ca)

Rational: environmental hydraulics and implications for environmental sustainability and the sustainable use of water resources

## **CIV E 526 - Soil Remediation**

Identification of regulations and guidelines applicable to contaminated site assessment and remediation. Review of soil and contaminant properties that affect contaminant partitioning and movement in subsurface soils. Study of physical, chemical and biological treatment methods for the remediation of contaminated soils.

Offered: F14, 15, 16

Instructor: Dr. Selma E. Guigard [sguigard@ualberta.ca](mailto:sguigard@ualberta.ca)

Rational: soil remediation is an essential process to reclaiming land which is important for environmental sustainability

## **CIV E620 - Environmental Engineering Measurements I**

Theory and procedures for determining the quality of natural water, potable water, municipal and industrial wastes. Fundamental parameters and concepts for environmental quality evaluation.

Offered: F14, 15

Instructor: Leonidas Perez-Estrada [prezestr@ualberta.ca](mailto:prezestr@ualberta.ca)

Rational: course focuses on environmental quality evaluation

## **CIV E 623 - Industrial Water and Wastewater Management**

Industrial water quantity and quality requirements. Characteristics of wastes, inplant controls, product recovery; effluent characteristics, chemical and toxic properties, pretreatment and treatment design theory and methodology, water reclamation and reuse regulations.

Offered: W16, 17

Instructor: Dr. Ian D Buchanan [idb@ualberta.ca](mailto:idb@ualberta.ca)

Rational: water reclamation has implications for environmental sustainability

## **CIV E 625 - Engineering Management of Water Quality**

Concepts, rationale, theory, institutions and engineering aspects of water quality management. Methods of water quality management; oxygen; chemical and microbial models, natural and induced re-aeration techniques; thermal pollution and ice cover considerations.

Offered: W16

Instructor: Dr. Mohamed Gamal El-Din [mgg1@ualberta.ca](mailto:mgg1@ualberta.ca)

Rational: water quality management has implications for environmental sustainability

## **CIV E 627 - Environmental Engineering Measurements II**

Laboratory experiments to present techniques for obtaining data and relationships needed for design of treatment facilities. Introduction to experimental design principles and their application. Statistical analysis of experimental data for data interpretation, presentation and design.

Offered: W15, 16, 17

Instructor: Dr. Yang Liu [liu14@ualberta.ca](mailto:liu14@ualberta.ca)

## **CIV E 628 - Municipal Solid Waste Management**

Principles of municipal waste management to protect public health, municipal waste streams, waste stream analysis and prediction. Refuse collection, storage and hauling methods, and facilities. Engineering design and operation of solid waste processing, treatment and disposal methods: resource recovery, recycling programs, incineration, composting, landfilling, and novel techniques. Solid waste legislation and policies. Environment impacts, impact management and facility siting of waste facilities.

Offered: F16

Instructor: Dr. Daryl McCartney [dm20@ualberta.ca](mailto:dm20@ualberta.ca)

Rational: waste management is a central challenge to environmental sustainability

## **CIV E 635 - Advanced Environmental Fluid Mechanics**

Mixing processes and pollutant transport in rivers, lakes, estuaries, coastal waters, and the atmosphere.

Offered: W15, 16, 17

Instructor: Dr. David Zhu [dzhu@ualberta.ca](mailto:dzhu@ualberta.ca)

Chemical and Material Engineering (CME):

## **CME 200 - Introduction to Chemical and Materials Engineering**

Topics of interest to second year Chemical and Materials Engineering students, with special reference to industries in Alberta, including coverage of elements of ethics, equity, concepts of sustainable development and environmental stewardship, public and worker safety and health considerations including the context of the Alberta Occupational Health and Safety Act. Offered in a single day during the first week of September. Restricted to students registered in the Department of Chemical and Materials Engineering.

Offered: F14, 15, 16

Instructor: Dr. Arvind Rajendran [arajendr@ualberta.ca](mailto:arajendr@ualberta.ca)

Electrical and Computer Engineering (ECE):

## **ECE 475 - Optoelectronic and Photovoltaic Devices**

Basic optical properties of crystalline and amorphous semiconductor materials: energy band diagrams, optical constants. Recombination and light emission in semiconductors. Light emitting diodes: spectral characteristics, materials, and applications. Stimulated emission and laser oscillation conditions in semiconductors. Laser diodes: modal and spectral properties, steady state rate equations, materials and structures. Light absorption, optical to electrical energy conversion. Photovoltaic cells: fill factors and efficiency, temperature effects, alternative materials and structures.

Offered: W15, 16, 17



Instructor: Dr. Ray Decorby [rdecorby@ualberta.ca](mailto:rdecorby@ualberta.ca)

Rational: Specifically focuses on the application of electrical engineering principles to renewable energy devices

Engineering, General (ENGG):

## **ENGG 100 - Orientation to the Engineering Profession I**

An introduction to the Faculty of Engineering and the engineering profession: the engineering disciplines; study skills; cooperative education; work opportunities; **engineering and society including elements of ethics, equity, concepts of sustainable development and environmental stewardship, public and worker safety and health considerations including the context of the Alberta Occupational Health and Safety Act.**

Offered: F15, 16, 17

Instructor: David Lynch [dlynch@ualberta.ca](mailto:dlynch@ualberta.ca)

Rational: Mandatory course for all engineers that covers topics relevant to all aspects of sustainability including “ethics, equity, concepts of sustainable development and environmental stewardship, [and] public and worker safety and health”.

## **ENGG 101 - Orientation to the Engineering Profession II**

An introduction to the engineering profession and its challenges: the engineering disciplines, career fields; **professional responsibilities of the engineer including elements of ethics, equity, concepts of sustainable development and environmental stewardship, public and worker safety and health considerations including the context of the Alberta Occupational Health and Safety Act.**

Offered: W15, 16, 17

Instructor: David Lynch [dlynch@ualberta.ca](mailto:dlynch@ualberta.ca)

Rational: Mandatory course for all engineers that covers topics relevant to all aspects of sustainability including “ethics, equity, concepts of sustainable development and environmental stewardship, [and] public and worker safety and health”.

## **ENGG 404 - Engineering Safety and Loss Management**

A broad study of the principles and practices of providing a safe and reliable working environment in all types of major industries. Government regulatory requirements are reviewed. The key topics of study, using leading industry practices, are industrial health, safety, and environmental risks. The course emphasizes the importance of the decisions of engineers and business managers in protecting workers, the environment, assets, production, and the public in general. Case studies, and guest lecturers from industry and government are included.

Offered: F14 (2), 15 (2), 16 (2)

Instructor: Dr. Gordon Winkel [winkel@ualberta.ca](mailto:winkel@ualberta.ca) & Dr. John Cocchio [cocchio@ualberta.ca](mailto:cocchio@ualberta.ca) & Dr. Lianne Lefsrud [lefsrud@ualberta.ca](mailto:lefsrud@ualberta.ca)

Rational: Dr. Arvind Rajendran recommended this course as including sustainability. He specified that "Sustainability is also embedded in most of what we do as chemical and materials engineers where we are constantly looking for new technologies and processes that enable sustainable use of our resources" and identified these courses as part of the "curriculum and research [that is] geared to meet those objectives".

## **ENGG 406 - Engineering Safety and Risk Management**

A comprehensive study of the theories and practices of providing a low-risk working environment in all types of major industries, with particular emphasis on risk analysis/management solutions. Case studies of recent industrial disasters and industrial site visits are used to focus on proactive management techniques. The course strongly emphasizes risk analysis, risk management, and loss control. Techniques of leadership, management, and motivation to provide excellence of results are emphasized. Legal and ethical responsibilities of engineers and business managers are reviewed.

Offered: W15 (2), 16 (2), 17 (2)

Instructor: Gordon Winkel [winkel@ualberta.ca](mailto:winkel@ualberta.ca) & John Cocchio [cocchio@ualberta.ca](mailto:cocchio@ualberta.ca)

## **ENGG 600 - Engineering Ethics and Integrity**

The technical and professional duties and responsibilities of the engineer. Academic integrity and research ethics. Intellectual property. The ethics of the engineering profession; technical and professional organizations. The impact of engineering decisions on society, including elements of equity, concepts of sustainable development and environmental stewardship, public and worker safety and health considerations including the context of the Alberta Occupational Health and Safety Act. Intellectual property.

Offered: W15, F15, W16, F16, W17

Instructor: Dr. Vinay Prasad [vprasad@ualberta.ca](mailto:vprasad@ualberta.ca)

## Engineering Management (ENG M):

### **ENG M 508 - Energy Auditing and Management**

Concepts and value of energy management and conservation. Methodologies for energy management in energy intensive systems in various industries. Energy auditing methods and implementation. Energy accounting and economic analysis. Energy audits and maintenance. Exposure to software for energy auditing.

Offered: F14, 15, 16

Instructor: Dr. Amit Kumar [amitk@ualberta.ca](mailto:amitk@ualberta.ca)

Rational: implications for energy waste reduction

## Environmental Engineering (ENV E):

### **ENV E 220 - Environmental Chemistry for Engineering**

Survey of basic principles in analytical, inorganic, and organic chemistry with emphasis on environmental engineering applications. Laboratory measurements related to water quality.

Offered: F14, 15, 16

Instructor: Dr. Ania Ulrich [aulrich@ualberta.ca](mailto:aulrich@ualberta.ca)

Rational: considerations for environmental sustainability

## **ENV E 222 - Chemical and Physical Processes**

Theory of chemical and physical processes and their application in environmental engineering.

Offered: W15

Instructor: Dr. Tong Yu [tongyu@ualberta.ca](mailto:tongyu@ualberta.ca)

Rational: considerations for environmental engineering and environmental sustainability

## **ENV E 320 - Environmental Hydrology**

Introduction to concepts in hydrology and hydrogeology. Hydrology topics include precipitation, evaporation, infiltration, streamflow, and hydrograph analysis. Hydrogeology topics include infiltration, percolation, seepage, drainage, aquifer hydraulics, and urban runoff quality.

Offered: F14, 15, 16

Instructor: Dr. Ty Gan [tgan@ualberta.ca](mailto:tgan@ualberta.ca)

## **ENV E 325 - Chemical and Physical Processes**

Theory of chemical and physical processes and their application in environmental engineering.

Offered: W17

Instructor: Dr. Tong Yu [tongyu@ualberta.ca](mailto:tongyu@ualberta.ca)

Rational: considerations for environmental engineering and environmental sustainability

## **ENV E 423 - Principles of Air Quality Management and Control**

A first course on air quality and air pollution, dealing with: types of gaseous and particulate pollutants and their sources, effects of air pollution on man, vegetation, and materials, indoor air pollution, sampling and analysis of air pollutants, air pollution meteorology and dispersion, control

techniques for gaseous and particulate pollutants, and air quality management aspects.

Offered: F14, 15

Instructor: Dr. Zaher Hashisho [hashisho@ualberta.ca](mailto:hashisho@ualberta.ca)

Rational: implications for environmental sustainability

## **ENV E 432 - Solid Waste Management**

Principles of solid waste management to protect public health. Study of solid waste components, refuse collection, storage, and handling. Design and operation of solid waste transfer and disposal facilities including transfer stations, resource recovery and composting facilities, incinerators, and landfills

Offered: F14, 15, 16

Instructor: Bipro Dhar [bipro@ualberta.ca](mailto:bipro@ualberta.ca)

Rational: waste management is a central environmental sustainability challenge

## **ENV E 434 - Environmental Geotechnics**

Design of soil waste containment systems; stability of natural slopes, engineered cuts and embankments; earth pressure theories; design of retaining structures and pressures on buried pipes; settlement of earth containment structures and foundations; load-carrying capacity of foundations; design for filtration, separation, containment, and reinforcement using geosynthetics.

Offered: W15, 16, 17

Instructor: Nicholas Beier [nabeier@ualberta.ca](mailto:nabeier@ualberta.ca)

## **ENV E 440 - Facility Design**

Design of water supply, water treatment, wastewater treatment, or sewerage and storm water management facilities. Course includes major design projects, field trips, and presentations. Students work in teams on a design project.

Offered: W15, 16, 17

Instructor: Dr. Ian D Buchanan [idb@ualberta.ca](mailto:idb@ualberta.ca)

Rational: course touches on aspects of facility design to reduce environmental impact

## Materials Engineering (MAT E):

### **MAT E 464 - Materials Process Engineering Design**

Engineering design concepts in materials processing. Cost estimation. Project planning and scheduling. Plant safety and hazards analysis. Selected project design examples.

Offered: F14, 15, 16

Instructor: Dr. Qi Liu [qliu@ualberta.ca](mailto:qliu@ualberta.ca)

Rational: **Could not find syllabus**, Dr. Arvind Rajendran recommended this course as including sustainability. He specified that “Sustainability is also embedded in most of what we do as chemical and materials engineers where we are constantly looking for new technologies and processes that enable sustainable use of our resources” and identified these courses as part of the “curriculum and research [that is] geared to meet those objectives”.

### **MAT E 465 - Materials Design Project**

Team materials design projects. Feasibility study and detailed materials design including: selection of materials and manufacturing processes; cost analysis; safety, social, and environmental considerations; failure modes; and microstructural specifications. Projects will require students to exercise creative and critical thinking, decision making, and demonstrate integration of Materials Engineering practice and synthesis of technical knowledge rather than simply analyze existing designs.

Offered: W15, 16, 17

Instructor: Dr. John Nychka [jnychka@ualberta.ca](mailto:jnychka@ualberta.ca) & Matthew Yarmuch [myarmuch@ualberta.ca](mailto:myarmuch@ualberta.ca)

Rational: **Could not find syllabus**, Dr. Arvind Rajendran recommended this course as including sustainability. He specified that “Sustainability is also embedded in most of what we do as chemical and materials engineers where we are constantly looking for new technologies and processes that enable sustainable use of our resources” and identified these courses as part of the “curriculum and research [that is] geared to meet those objectives”.

## Mechanical Engineering (MEC E):

## **MEC E 443 - Energy Conversion**

Sources, flow and overall efficiency of use of various energy forms in society, thermodynamic analysis of energy conversion devices such as thermoelectric and magnetohydrodynamic generators, solar and fuel cells, energy from fission and fusion reactors. Prerequisite: MEC E 340.

Offered: W15, 16, 17

Instructor: Dr. Marc Secanell Gallart [secanell@ualberta.ca](mailto:secanell@ualberta.ca)

Rational: recommended by Linda Paulic

## **MEC E 460 - Design Project**

Feasibility study and detailed design of a project which requires students to exercise creative ability, to make assumptions and decisions based on synthesis of technical knowledge, and in general, devise new designs, rather than analyze existing ones.

Offered: F14, W15, F15, W16, F16, W17

Instructor: Dr. Kajsa Duke [kkduke@ualberta.ca](mailto:kkduke@ualberta.ca)

Rational: recommended by Linda Paulic

## **Faculty of Extension - Sustainability Courses:**

Note:

- These are courses available for credit, extension sustainability courses and extension courses that include sustainability are included in the credit EN-12



# Faculty of Extension - Courses that include Sustainability:

Note:

- These are courses available for credit, extension sustainability courses and extension courses that include sustainability are included in the credit EN-12

## **COMM 554 - Risk Communication**

The theory, research, and practice of risk communication are explored through the introduction of models of risk communication and risk assessment in various contexts which may include environmental issues, public health and safety, occupational hazards, and consumer products. Students may not receive credit for both COMM 597 (Case Studies in Risk Communication) and COMM 554.

Offered: Su15, 16

Instructor: Thomas Barker [tbarker@ualberta.ca](mailto:tbarker@ualberta.ca)

Rational: put forwards by Christie Schultz, discusses risk assessment and environmental issues.

## **COMM 597 - Topics in Communications and Technology: Exploring Agroecology in Cuba\***

Through direct dialogue with farmers, cooperatives, research centers and NGO's, you will explore the policies, practices and social movement that have made Cuba a world leader in agroecology. In addition to many site visits and technical workshops, you will also take part in hands-on learning and cultural activities.

Rational: recommended by Christie Schultz.

\*Not included for the purposes of STARS credit AC1

# Campus Saint-Jean - Sustainability Courses:

Anthropologie (ANTHE):



## **ANTHE 110 - Ethnologie du sexe, de l'âge et du pouvoir**

Dans toute société, le statut social de l'individu et des groupes change au cours du cycle de la vie. Ce cours examine comment l'âge et le sexe privilégient les rôles et le statut social dans des sociétés différentes.

Offered: W15, 16, 17

Instructor: Boniface Bahi [bahi@ualberta.ca](mailto:bahi@ualberta.ca)

Rational: Recommended by Sarah Pelletier, meets the criteria of “6) Governance, social equity, and capacity 8) Culture, religion, and ethics 10) Peace, security and well-being” from PAACS definition of sustainability

## **ANTHE 207 - Introduction à l'anthropologie sociale et culturelle**

Étude comparative de la société et de la culture humaine, en insistant sur la famille, la structure sociale, l'économie, les institutions politiques et la religion, les procédures de changement, et l'histoire de l'anthropologie sociale et culturelle. Peut comprendre des sections Alternative Delivery; veuillez consulter le Fees Payment Guide dans la section University Regulations and Information for Students de l'annuaire. Note(s): \*3 en ANTHE ou ANTHR sont fortement recommandés.

Offered: W15, 17

Instructor: Boniface Bahi [bahi@ualberta.ca](mailto:bahi@ualberta.ca)

Rational: Recommended by Sarah Pelletier, meets the criteria of “6) Governance, social equity, and capacity 8) Culture, religion, and ethics 10) Peace, security and well-being” from PAACS definition of sustainability

Economie (ECONE):

## **ECONE 365 - Économie des ressources**

Étude des problèmes liés à l'exploitation de ressources naturelles renouvelables et non-renouvelables, incluant l'exploration, l'extraction et la taxation; rareté et détermination des prix des ressources; politiques canadiennes actuelles touchant ces sujets. Préalable(s): ECONE 101 ou

équivalent. Note: ECON 365 et AREC 365 ne peuvent pas être suivis tous les deux pour crédits.

Offered: F14, 15, 16

Instructor: Bruno Nkuiya Mbakop [nkuiyamb@ualberta.ca](mailto:nkuiyamb@ualberta.ca)

Rational: Recommended by Sarah Pelletier, counterpart of ECON/AREC 365 offered through CSJ.

## Education - Fondements (EDU F):

### **EDU F 235 - École et société**

Ce cours examine les rapports entre les écoles, les salles de classe, les communautés et la société. Il vise à sensibiliser les étudiants aux enjeux de l'équité et à mieux comprendre les processus d'inclusion et d'exclusion en milieu scolaire. Ce cours offre aux étudiants l'option de faire un stage de bénévolat de 20 heures avec un organisme communautaire à but non lucratif dans le cadre du programme « Community Service-Learning ». Note : Ce cours n'est pas accessible aux étudiants ayant des crédits pour FO ED 200.

Offered: F14, W15, Sp15, F15, W16, Sp16, F16, W17

Instructor: Sayouba Ouedraogo [sayouba@ualberta.ca](mailto:sayouba@ualberta.ca)

Rational: Recommended by Sarah Pelletier, counterpart of EDPS 360 offered through CSJ.

## Philosophie (PHILE):

### **PHILE 386 - La bioéthique**

Regard philosophique sur les problèmes majeurs de la bioéthique. Exemples: les droits et les devoirs du personnel hospitalier et du patient, l'euthanasie active et passive, le droit à la vie et l'avortement, la recherche et l'expérimentation en médecine humaine et animale, la manipulation génétique.

Offered: F14, 15, 16

Instructor: Boniface Bahi [bahi@ualberta.ca](mailto:bahi@ualberta.ca)

Rational: Recommended by Sarah Pelletier, meets the criteria of “6) Governance, social equity and capacity 8) Culture, religion and ethics 10) Peace, security and well-being” from PAACS definition of sustainability

## Sociologie (SOCIE):

### **SOCIE 100 - Introduction à la sociologie**

Examen de la théorie, des méthodes et de la substance de la sociologie. Étude de la façon dont les sociétés comprennent la culture, la socialisation, la déviance, la stratification et les groupes. Le procès de transformation sociale par les mouvements sociaux, l'industrialisation, etc. Note: Ce cours n'est pas accessible aux étudiants ayant des crédits en SOCIE 300.

Offered: F14, W15, F15, F16

Instructor: Boniface Bahi [bahi@ualberta.ca](mailto:bahi@ualberta.ca)

Rational: SOC 100 is included and the course content is the same

### **SOCIE 269 - Sociologie de la mondialisation**

Introduction à l'analyse critique des transformations de l'économie-monde et de leurs impacts économiques, politiques, sociaux et culturels. La mondialisation comme fait social, les acteurs de la mondialisation, les discours pro-anti- et alter-mondialisation. Préalable: SOCIE 100.

Offered: F14, 16

Instructor: Guillaume Durou [durou@ualberta.ca](mailto:durou@ualberta.ca)

Rational: Recommended by Sarah Pelletier, counterpart of SOC 269 offered through CSJ.

### **SOCIE 301 - Sociologie des rapports de sexes**

Étude comparée des rapports entre les femmes et les hommes dans certaines sociétés, en mettant l'accent sur le Canada contemporain; étude des rôles spécifiques à chaque sexe, et des théories relatives à leurs origines; recherche sociologique récente sur l'importance de la division sexuelle de la société. Préalable: SOCIE 100.

Offered: F14, Sp15, F15, F16

Instructor: Sayouba Ouedraogo [sayouba@ualberta.ca](mailto:sayouba@ualberta.ca)

Rational: Recommended by Sarah Pelletier, meets the criteria of “3) Business and economics 6) Governance, social equity and capacity 8) Culture, religion and ethics” from PAACS definition of sustainability

## **SOCIE 412 - Sociologie du développement**

Analyse critique des enjeux de développement dans l'économie mondiale et le système interétatique; analyse de différents aspects des sociétés en voie de développement: régimes agraires et monde rural; stratégies d'industrialisation; marché du travail (secteur formel/informel); clivages sociaux (classes, castes, ethnies); conflits intercommunautaires; état (bureaucraties, régimes, politiques sociales); approche comparative interrégionale. Préalable: SOCIE 100.

Offered: F15, 16

Instructor: Boniface Bahi [bahi@ualberta.ca](mailto:bahi@ualberta.ca)

Rational: Recommended by Sarah Pelletier, meets the criteria of “3) Business and economics 6) Governance, social equity and capacity 8) Culture, religion and ethics” from PAACS definition of sustainability

## **Campus Saint-Jean - Courses that include Sustainability:**

Administration (ADMI):

### **ADMI 342 - Introduction au Commerce International**

Introduction aux outils requis pour réussir dans un monde des affaires de plus en plus international. Sert de tremplin à des cours plus avancés en affaires internationales. Les sujets couverts incluent les différences entre les pays, le commerce international, l'investissement direct étranger, l'intégration économique internationale, le marché des changes, et la stratégie et les opérations en affaires internationales. Note : Ce cours n'est pas accessible aux étudiants ayant ou postulant des crédits pour BUEC 342.

Offered: F14, 15, 16

Instructor: Sadok Ghouli [elghoul@ualberta.ca](mailto:elghoul@ualberta.ca)

Rational: Recommended by Sarah Pelletier, meets the criteria of “3) Business and economics 4) Culture, religion and ethics” from PAACS definition of sustainability

## **ADMI 479 - L'entreprise et le gouvernement au Canada**

Analyse de l'interaction entre l'entreprise et l'administration publique. On s'intéresse en particulier à la dynamique d'ajustement de la firme et du gouvernement dans les changements d'environnement et de politiques. Les motivations et comportements des décideurs publics et des personnes responsables de l'application des mesures sont présentés dans le contexte d'interaction entre les différents groupes impliqués. Sont posées les bases d'une analyse de l'efficacité des différentes politiques, tant fiscales que réglementaires, visant la firme. On y aborde aussi les conséquences des changements de l'environnement économique, technologique et social pour la firme. Préalable(s): ECONE 281 ou BUEC 311. Note: Ce cours n'est pas accessible aux étudiants ayant ou postulant des crédits pour BUEC 479.

Offered: W15, 16, 17

Instructor: Mohamed Moubarak [moubarak@ualberta.ca](mailto:moubarak@ualberta.ca)

Rational: Recommended by Sarah Pelletier, meets the criteria of "3) Business and economics" from PAACS definition of sustainability

## **Anthropologie (ANTHE):**

### **ANTHE 365 - Culture populaire**

Exploration approfondie de la culture populaire utilisant différentes approches théoriques et l'application des concepts de l'Anthropologie. Préalable(s): \*3 en ANTHE, ou autre science sociale, niveau 100.

Offered: F14

Instructor: Simone Gareau [sgareau@ualberta.ca](mailto:sgareau@ualberta.ca)

Rational: Recommended by Sarah Pelletier, meets the criteria of "8) Culture, religion and ethics" from PAACS definition of sustainability

## **Economie (ECONE):**

### **ECONE 323 - Économie internationale**

Aperçu des principes de l'économie internationale. Application de ces principes à la politique économique. L'accent est mis sur des sujets comme le commerce international, l'investissement

étranger et la balance des paiements. Préalable(s): ECONE 101 et 102, ou ECONE 223.

Offered: W15, 17

Instructor: Issoufou Soumaila [soumaila@ualberta.ca](mailto:soumaila@ualberta.ca)

Rational: Recommended by Sarah Pelletier, meets the criteria of “3) Business and economics” from PAACS definition of sustainability

## Education - Psychologie (EDU P):

### **EDU P 245 - Interactions sociales et communication**

Ce cours offre une introduction aux principaux paradigmes de la communication et des relations interpersonnelles. Il vise l'appropriation et l'approfondissement des modèles théoriques, des méthodes d'analyse et de communication et des stratégies pour comprendre la dynamique relationnelle afin d'intervenir sur celle-ci. Cette dynamique relationnelle renvoie à différentes situations de communication et relations interpersonnelles quotidiennes propres au milieu scolaire actuel (élèves, enseignants, parents, administrateurs, etc.). Note: Ce cours n'est pas accessible aux étudiants ayant des crédits pour PS ED 250 et EDU P 241

Offered: F14, W15, F15, W16, F16,

Instructor: Emilie Lavoie [emlavoie@ualberta.ca](mailto:emlavoie@ualberta.ca)

Rational: Recommended by Sarah Pelletier, meets the criteria of “8) Culture, religion and ethics” from PAACS definition of sustainability

## Histoire (HISTE):

### **HISTE 311 - Histoire de l'Afrique francophone**

Étude de l'Afrique francophone de la décolonisation à nos jours : le poids de son passé colonial, ses défis politiques, économiques et sociaux, sa place au sein de la francophonie internationale. Préalable(s): \*3 HISTE de niveau 100 ou 200.

Offered: W17

Instructor: Anne Boerger [aboerger@ualberta.ca](mailto:aboerger@ualberta.ca)

Rational: Recommended by Sarah Pelletier, meets the criteria of “6) Governance, social equity and

capacity 8) Culture, religion and ethics” from PAACS definition of sustainability

Physique (PHYSQ):

## **PHYSQ 261 - Physique de l'énergie et de l'environnement**

Diverses formes d'énergie; conservation de l'énergie. Principes de thermodynamique; gaz parfaits; transitions de phase ; pompes à chaleur et réfrigérateurs. Transfert de chaleur. Consommation de ressources énergétiques. Physique nucléaire; radioactivité; fission, énergie nucléaire. Énergie de remplacement et sources d'énergie renouvelable. Préalable(s): PHYSQ 126 et MATHQ 113 ou MATH 114 ou 144. SCI 100 peut remplacer PHYSQ 126 et MATH 114.

Offered: F15

Instructor: Dr. Marc de Montigny [mdemonti@ualberta.ca](mailto:mdemonti@ualberta.ca)

Rational: Recommended by Sarah Pelletier, meets the criteria of “2) Natural limits and ecosystem maintenance 5) Science, engineering and technology” from PAACS definition of sustainability

Science Politique (SC PO):

## **SC PO 261 - Relations internationales I**

Introduction au rôle de l'État au sein du système international ayant pour but de développer une connaissance des événements contemporains internationaux. Ce cours couvre la nature de la politique étrangère et la dynamique d'interaction entre les États. Préalable(s): SC PO 101 ou SC PO 102 ou POL S 101.

Offered: F14, 15, 16

Instructor: Anne Boerger [aboerger@ualberta.ca](mailto:aboerger@ualberta.ca)

Rational: Recommended by Sarah Pelletier, meets the criteria of “6) Governance, social equity, and capacity 7) Sustainability discourse” from PAACS definition of sustainability

## **SC PO 262 - Relations internationales II**

Introduction aux problèmes contemporains de relations internationales ayant pour but de développer une connaissance du système international. Ce cours porte sur le rôle des institutions internationales, des acteurs supra étatiques et non-étatiques, ainsi que certains enjeux liés à la mondialisation.

Offered: W15, 16

Instructor: Francois Pageau [fpageau@ualberta.ca](mailto:fpageau@ualberta.ca)

Rational: Recommended by Sarah Pelletier, meets the criteria of “6) Governance, social equity, and capacity 7) Sustainability discourse” from PAACS definition of sustainability

## **SC PO 320 - La politique du système de santé au Canada**

Le développement du système de santé canadien, ses composantes législatives et philosophiques ainsi que son financement et son organisation; l'étude comparative des défis au système de santé canadien posés par les enjeux financiers, l'accès universel et les modes alternatifs. Note(s): (1) La priorité sera accordée aux étudiants du BSclnf (bilingue).(2) Ce cours n'est pas accessible aux étudiants ayant ou postulant des crédits pour POL S 321 ou 322.

Offered: W15, 16, 17

Instructor: Guillaume Durou [durou@ualberta.ca](mailto:durou@ualberta.ca)

Rational: Recommended by Sarah Pelletier, meets the criteria of “10) Peace, security and well-being” from PAACS definition of sustainability

Sociologie (SOCIE):

## **SOCIE 368 - Etude des minorités et des groupes ethniques**

Analyse de processus sociaux qui permettent le développement et la compréhension du statut des minorités. Etude de cas des relations entre les groupes ethniques et minoritaires fondée sur les travaux réalisés à l'échelle nationale. Préalable(s): SOCIE 100 ou SOC 300.

Offered: W15, 16, 17

Instructor: Guillaume Durou [durou@ualberta.ca](mailto:durou@ualberta.ca)

Rational: Recommended by Sarah Pelletier, meets the criteria of “6) Governance, social equity, and



capacity 8) Culture, religion and ethics” from PAACS definition of sustainability

## **SOCIE 371 - La famille**

Le système familial vu dans le contexte de l'histoire et de la rencontre des cultures. Étude du système familial dans les sociétés contemporaines, soulignant les aspects caractéristiques de l'institution et ses tendances actuelles.

Offered: Sp16

Instructor: Boniface Bahi [bahi@ualberta.ca](mailto:bahi@ualberta.ca)

Rational: Recommended by Sarah Pelletier, meets the criteria of “8) Culture, religion and ethics” from PAACS definition of sustainability

## **Faculty of Law - Sustainability Courses:**

### **LAW 399 - Introduction to Environmental Law**

Introduces students to the basic structure and function of the legal system. It will then focus on the way in which law is used to control environmental problems, focussing on major federal and provincial pollution licensing legislation, and the legal duties of persons working within industry. Regimes for environmental impact assessment and the use of criminal and civil enforcement mechanisms will also be included. The relationship between legal rules and non-legal industry standards and voluntary initiatives may also be explored.

Offered: W15, 16, 17

Instructor: Erin Eacott [eacott@ualberta.ca](mailto:eacott@ualberta.ca)

### **LAW 559 - Environmental Law and Policy**

Canadian laws and policies designed to control air, land, and water pollution, including licensing systems, the use of quasi-criminal sanctions, environmental impact assessment processes, constitutional issues, and the usefulness of the common law. Other topics may include alternative legal approaches, such as economic incentives, wildlife protection, environmental rights, parks, the public trust doctrine or environmental mediation.

Offered: W15, F15, W16, F16

Instructor: Dr. Cameron Jefferies [cameronj@ualberta.ca](mailto:cameronj@ualberta.ca)

Rational: recommended by Moin Yahya identified this course as touching on issues relevant to Sustainability. Since the explicit focus of this course is on Environmental Law I categorized it as sustainability focused.

## **LAW 593 - International Environmental Law**

The development of international law in the environmental area. Topics to be covered include: customary principles of state responsibility; multilateral environmental treaties; global atmospheric issues; toxic contamination; sustainable development; biodiversity conservation; and international trade implications. It is recommended, but not required, that students enrolled in this course take Public International Law.

Offered: F14, F15, W17

Instructor: Dr. Cameron Jefferies [cameronj@ualberta.ca](mailto:cameronj@ualberta.ca)

Rational: Recommended by Moin Yahya identified this course as touching on issues relevant to Sustainability. Since the explicit focus of this course is on Environmental Law in an international context, I categorized it as sustainability focused.

## **Faculty of Law - Courses that include Sustainability:**

### **LAW 507 - Canadian Human Rights Law**

This course focuses on the practice of human rights law in Canada. The importance of anti-discrimination legislation will be discussed, as will the development, interpretation, and

enforcement of the Canadian Human Rights Act and the provincial legislative schemes. Reference will also be made to the international context and to the equality provisions of the Canadian Charter of Rights and Freedoms. Students will also learn the practical aspects of litigating a human rights case in Canada. Credit will not be granted if credit has been received for Human Rights Law in Canada under the LAW 599 course number.

Offered: F16

Instructor: Patricia Paradis [pparadis@ualberta.ca](mailto:pparadis@ualberta.ca)

## **LAW 543 - Basic Oil and Gas Law**

The origin, occurrence, and production of oil and gas; the nature of interests in oil and gas; the acquisition and disposition of interests in oil and gas; the rights and duties of parties under oil and gas leases; pooling of oil and gas interests; acquisition of surface leases and pipeline easements.

Offered: F14, W15, F15, W16, F16, W17

Instructor: Dr. Cameron Jefferies [cameronj@ualberta.ca](mailto:cameronj@ualberta.ca)

Rational: Vice Dean Moin Yahya identified this course as touching on issues relevant to Sustainability

## **LAW 552 - Natural Resources Law**

The judicial, legislative, administrative and policy problems related to the regulation and management of natural resources, including problems of allocation, development, use, pollution control, and conservation.

Offered: W15, F15

Instructor: Elaine Hughes [elhughes@ualberta.ca](mailto:elhughes@ualberta.ca)

## **LAW 599 - Seminars on Specialized Legal Topics\***

These seminars will cover specialized topics of emerging importance in the law at a senior level. The particular topic covered would vary dependent on the availability of Faculty with necessary teaching competence, student interest, and the needs of the legal profession. Sections may be offered in a Cost Recovery format at an increased rate of fee assessment; refer to the Fees Payment Guide in the University Regulations and Information for Students.

Offered: F16 - Indigenous Law - Hadley Friedman [hfriedla@ualberta.ca](mailto:hfriedla@ualberta.ca)

W17 - Water Law - David Percy [dpercy@ualberta.ca](mailto:dpercy@ualberta.ca)

Rational: identified by Vice Dean Moin Yahya

\*Not included for the purposes of STARS credit AC1

## Faculty of Medicine and Dentistry - Sustainability Courses:

## Faculty of Medicine and Dentistry - Courses that include Sustainability:

Biomedical Engineering (BME):

### **BME 511 - Stem Cell Engineering**

This course will give an overview of the stem cell biology and biomedical applications. Topics will include biological aspects of stem cells, environmental factors and signals that are implicated in regulating stem cell fate, the practical use of stem cells for tissue engineering and cellular therapies. The course will highlight techniques for engineering of stem cells and their micro-environments. The ethical, legal, and regulatory issues that accompany current and emerging stem cell engineering applications will be also discussed. This course is designed for upper undergraduates and graduate students with a strong interest in stem cell biology and stem cell engineering, and the desire to actively contribute to discussions in the class.

Offered: F16

Instructor: Hilal Gul [dilrubah@ualberta.ca](mailto:dilrubah@ualberta.ca)

Rational: course discusses the ethical implications and social impact of stem cell engineering

Dental Hygienic (D HGY):

## **D HYG 320 - Health Education and Leadership**

This course provides teaching and leadership skills for the dental hygienist through lecture and a teaching practicum. Topics include learning theory, teaching methods, health literacy, cultural competence and public speaking. Teaching to an audience is practiced in two different community settings.

Offered: F14, 15, 16

Instructor: Barbara Gitzel [bgitzel@ualberta.ca](mailto:bgitzel@ualberta.ca)

Rational: health education impacts social sustainability

## **D HYG 322 - Population Health, Health Promotion and Community**

This course prepares students with an understanding of the factors that affect the health and well-being of the population. Students will learn about the determinants of health and suggest strategies for working with other disciplines and community agencies to affect health outcomes. The course demonstrates applied public health principles in today's dental public health practice. Concepts of dental public health practice, examples of current programming in Alberta and Canada, and evidence-based public health prevention will be studied in context of the dental public health practice model.

Offered: W15, 16, 17

Instructor: Salima Thawer [svaljee@ualberta.ca](mailto:svaljee@ualberta.ca)

Rational: health promotion impacts population health which is central to social sustainability

## **D HYG 422 - Health Information and Policy**

This course examines the role policy plays in influencing general and oral health in a community setting. Students will utilize the Dental Hygiene Process of Care (assess, plan, implement and evaluate) as a framework for designing a community oral health plan to meet an identified need. Also offered as a distance course pursuant to enrolment quota.

Offered: F14 (2), F15 (2), F16 (2),

Instructor: Monika Kun [mkun@ualberta.ca](mailto:mkun@ualberta.ca)

Rational: community health is a central challenge for social sustainability

## **D HYG 440 - Advocacy for Change in Healthcare**

Provides an overview of the professional, social, political and global trends and issues affecting health and health care delivery. Through the application of a framework for planned change, this course will demonstrate how health care professionals can act as change agents in society. Also offered as a distance course pursuant to enrolment quota.

Offered: W15, 16, 17

Instructor: Arlynn Brodie [abrodie@ualberta.ca](mailto:abrodie@ualberta.ca)

Rational: community health is a central challenge for social sustainability

Laboratory Medicine and Pathology (LABMP):

## **LABMP 550 - Analytical and Environmental Toxicology**

Students will integrate knowledge and practical skills in the areas of environmental chemistry and toxicology. The student will learn to predict how chemicals can move and transform in the environment based on physical and chemical properties, how this affects human and environmental exposure, and consequences thereof for health. The basic principles of toxicology will be taught and students will gain appreciation for the diversity of physiological and/or biochemical mechanisms by which toxicants cause their adverse effects, and the various defenses our bodies have evolved to employ.

Offered: F14, 15, 16

Instructor: Dr. Chris Le [xcle@ualberta.ca](mailto:xcle@ualberta.ca)

## **Department of Medicine (MED)**

### **MED 515 - Community Health**

The Community Health program provides an overview of the field of public health sciences and demonstrates its importance to health care professionals. Content will include an introduction to the various aspects of public health (including disease and injury prevention, health promotion, determinants of health, disease surveillance, health status measurement, and population health), field experiences in public health operations, health care organizational issues, and evidence based medicine. This course has been specifically designed to emphasize the relevance of public health to everyday clinical practice.

Offered: W15

Rational: community health is a central challenge for social sustainability

### **MED 516A - Patient-Centered Care, Part I**

A discussion of medical skills which may be generalized across different disease states and different specialties. Topics include epidemiology, evidence-based Medicine, and public health, clinical skills, family issues, ethics, the role of the health-care team, and related areas. Instruction in the role of the health-care team will be carried out in conjunction with INT D 410.

Offered: F14, 15, 16

AND/OR

## **MED 516B - Physicianship I**

This course will encompass all aspects of the development of a physician including but not limited to professionalism, evidence based medicine, ethics, health equity, patient safety, patient immersion experiences, early clinical experiences, communication skills and physical examination, public health, health systems.

Offered: F14, W16, 17

Rational: Dr. Michael McMurty, the grad coordinator for the department of medicine, recommended that these classes be included as they touch on “aspects of sustainability that comprise the definition that you provided, including environmental and social determinants of health, inclusivity, and social justice.”

## **MED 526A - Physicianship II**

This course will build upon the knowledge and skills derived from Physicianship I. This course will encompass all aspects of the development of a physician, including but not limited to professionalism, ethics, health equity, patient safety, patient immersion experiences, early clinical experiences, communication skills and physical examination, public health, health systems, and evidence based medicine.

Offered: F14, 15, 16

## **MED 526B - Physicianship II**

This course will build upon the knowledge and skills derived from Physicianship I. This course will encompass all aspects of the development of a physician, including but not limited to professionalism, ethics, health equity, patient safety, patient immersion experiences, early clinical experiences, communication skills and physical examination, public health, health systems, and evidence based medicine.

Offered: W15, 16, 17

Rational: Dr. Michael McMurty, the grad coordinator for the department of medicine, recommended that these classes be included as they touch on “aspects of sustainability that comprise the definition that you provided, including environmental and social determinants of health, inclusivity, and social justice.”

## **MED 531 - Physicianship III /Transitions**

This course serves as a bridge of learning opportunities of the first two years to the last two years



of medical school. It will include: performance of clinical skills within a simulated clinical environment, approach to radiological problems, quality improvement, and social media in medicine, clinical reasoning, and awareness of well-being. This course will build upon the knowledge derived from the Physicianship I and II courses to demonstrate commitment, honesty, integrity, professionalism and compassion in their clinical work. It will be delivered throughout the third year. Open only to students registered in the MD Program.

Last offered: F15, W16, F16 (2), W17 (2)

Rational: Dr. Michael McMurty, the grad coordinator for the department of medicine, recommended that these classes be included as they touch on “aspects of sustainability that comprise the definition that you provided, including environmental and social determinants of health, inclusivity, and social justice.”

## **MED 541 - Physicianship IV /Transitions**

This course will build upon the knowledge derived from the Physicianship I, II and III courses and will occur throughout the 4th year. Open only to students registered in the MD Program.

Offered: F15, W16, F16, W17

Rational: Dr. Michael McMurty, the grad coordinator for the department of medicine, recommended that these classes be included as they touch on “aspects of sustainability that comprise the definition that you provided, including environmental and social determinants of health, inclusivity, and social justice.”

Pharmacology (PM COL):

## **PMCOL 305 - An Introduction to the Pharmacology of Drug Abuse**

An introduction to the complexities of drug abuse and the drugs of abuse. The student will be introduced to the psychological and social problems of drug abuse and their impact upon the abuser. Objectives of the course are to develop an understanding of addiction and a detailed knowledge of the nature of the commonly abused substances. Emphasis will be placed upon the pharmacology of drugs of abuse.

Offered: F14, 15, 16

Instructor: Dr. Martin Davies [mdavies@ualberta.ca](mailto:mdavies@ualberta.ca)

Rational: addressing the “psychological and social problems of drug abuse” has implications for

social sustainability

Psychiatry (PSYCI):

## **PSYCI 515 - Maternal, Child and Adolescent Mental Health**

Lectures and seminars on mental health from the perspective of the developing child and adolescent. As the foundations of mental health are determined by the complex interplay of genetics and the environment, issues related to maternal mental health and potential impact on the developing foetus are also examined. Prerequisite: consent of the Department.

Offered: W15, 16, 17

Instructor: Dr. Andrew Greenshaw [agreensh@ualberta.ca](mailto:agreensh@ualberta.ca)

Rational: community health is a central challenge for social sustainability

Radiation Therapy (RAD TH):

## **RADTH 328 - Health Care Advocacy and Policy**

Examines the role policy plays in health care. It provides an overview of the professional, social, regulatory, national and global trends and issues affecting care delivery and cancer screening and prevention strategies. Codes of ethics, standards and scopes of practice, and national and provincial legislation will be considered. The concepts of informed consent, quality improvement, and best practice will be studied. Prerequisite: RADTH 260.

Offered: F15, 16

Instructor: Kim Rans [krans@ualberta.ca](mailto:krans@ualberta.ca)

Rational: community health is a central challenge for social sustainability

Faculty of Native Studies -

# Sustainability Courses:

## **NS 110 - Historical Perspectives in Native Studies**

A thematic introduction to the historical relationships, colonial contexts, and social, economic, political and cultural patterns that have shaped the contemporary situation of Aboriginal peoples in Canada. Not open to students with credit in NS 210.

Offered: F14, W15, Sp15, F15, W16, Sp16, F16, W17

Instructor: Paul Gareau [pgareau@ualberta.ca](mailto:pgareau@ualberta.ca)

Rational: topics of course related to the social sustainability and cultural vitality of the indigenous peoples of Canada. Considered core course for the Certificate in Sustainability.

## **NS 111 - Contemporary Perspectives in Native Studies**

An introductory survey of current issues affecting Aboriginal peoples in Canada and their efforts to confront their colonial relationships with and within Canadian society. Not open to students with credit in NS 211.

Offered: F14, W15 (2), F15, W16 (2), Sp16, F16, W17 (2)

Professor: D'Arcy Vermette [dvermett@ualberta.ca](mailto:dvermett@ualberta.ca)

Rational: topics of course related to the social sustainability and cultural vitality of Aboriginal peoples in Canada. Considered core course for the Certificate in Sustainability.

## **NS 200 - Aboriginal Canada: Looking Forward/Looking Back**

For students from faculties outside the Faculty of Native Studies with an interest in acquiring a basic familiarity with Aboriginal/non-Aboriginal relationships, particularly those in Alberta. Consists of a survey of historical and contemporary relationships between Aboriginal peoples and newcomers, with the aim of expanding the understandings held by many Canadians about these

relationships. Not designed for Native Studies majors.

Offered: F14 (2), F15 (4), F16, W17

Professor: Dr. Adam Gaudry [gaudry@ualberta.ca](mailto:gaudry@ualberta.ca)

Rational: topics of course related to the social sustainability and cultural vitality of the indigenous peoples of Canada. Considered core course for the Certificate in Sustainability.

## **NS 201 - Aboriginal Canada: Looking Forward/Looking Back**

For students from faculties outside the Faculty of Native Studies with an interest in acquiring a basic familiarity with Aboriginal/non-Aboriginal relationships. Consists of a survey of historical and contemporary relationships between Aboriginal peoples and newcomers, with the aim of expanding the understandings held by many Canadians about these relationships. This course will be delivered online. Not open to students with credit in NS 200. Not designed for Native Studies majors. Sections may be offered in a Cost Recovery format at an increased rate of fee assessment; refer to the Fees Payment Guide in the University Regulations and Information for Students section of the Calendar.

Offered: F16 (2), W17

Instructor: Paul Gareau [pgareau@ualberta.ca](mailto:pgareau@ualberta.ca)

Rational: topics of course related to the social sustainability and cultural vitality of the indigenous peoples of Canada.

## **NS 362 - Aboriginal Women**

An interdisciplinary approach to understanding historical and contemporary experiences of Aboriginal women. Examines the ways in which Aboriginal women have resisted and been shaped by colonialism and other contemporary racialized gendered practices through an exploration of community, race, gender, sexuality, identity, representation, and activism. The course also considers the ways in which Indigenous knowledge shape alternative ways of conceptualizing and

politicizing history, identity, place, self-determination, land rights, resources and wellbeing.  
Prerequisites: NS 110, 111 and 240 or 290 or consent of the Faculty.

Offered: F15, W17

Instructor: Dr. Isabel Altamirano-Jimenez [isabel@ualberta.ca](mailto:isabel@ualberta.ca)

Rational: topics of course related to the social sustainability and cultural vitality of the indigenous peoples of Canada.

## **NS 420 - Negotiation Strategies**

An exploration of the theory and practice of negotiation and mediation from different perspectives, including perspectives from the dominant society and Indigenous peoples. The strategies of litigation, and coercion to overcome conflict and achieve settlements of disputes will also be examined. These negotiation theories will then be applied to concrete dispute situations in Canada, including multi-party disputes over land, governance, development of resources and the environment. This course will be taught in a seminar format. Prerequisite: NS 320 or 340 or consent of the Faculty. Sections may be offered in a Cost Recovery format at an increased rate of fee assessment; refer to the Fees Payment Guide in the University Regulations and Information for Students section of the Calendar.

Offered: Sp15, 16

Instructor: Richard Price [rprice@ualberta.ca](mailto:rprice@ualberta.ca)

Rational: topics of course related to the social sustainability and cultural vitality of the indigenous peoples of Canada

## **NS 435 - Management of Aboriginal Natural Resources**

The application of knowledge of resource management to the traditional Native economic activities, especially hunting, fishing and trapping. Conservation problems that developed with the spread of the commercial economy will be analyzed by examining Aboriginal and European approaches to resource management. The uses of conservation to rationalize the re-allocation of

traditional resources are examined. Prerequisites: Any \*6 in EAS 294, 391, ENCS 201, 260 or AUGEO 324, or one 300-level NS course or consent of the Faculty. Sections may be offered in a Cost Recovery format at an increased rate of fee assessment; refer to the Fees Payment Guide in the University Regulations and Information for Students section of the Calendar.

Offered: W15 (2), F16, W17

Instructor: Ellen Bielawski [ellenb@ualberta.ca](mailto:ellenb@ualberta.ca)

Rational: topics of course related to the social sustainability and cultural vitality of the indigenous peoples of Canada. Considered an elective course for the Certificate in Sustainability.

## Faculty of Native Studies - Courses that include Sustainability:

### **NS 240 - Introduction to Aboriginal Legal Issues**

This course is designed to give students an introduction to the development of Aboriginal rights law in Canada. It examines the colonial context of Canadian constitutional law, identifies sources of Aboriginal law, discusses the Treaty and Aboriginal rights and the nature of the fiduciary obligations of the Crown to Aboriginal peoples. Sections may be offered in a Cost Recovery format at an increased rate of fee assessment; refer to the Fees Payment Guide in the University Regulations and Information for Students section of the Calendar.

Offered: F14 (2), 15 (2), W17 (2)

Instructor: Professor Sean Robertson [sean2@ualberta.ca](mailto:sean2@ualberta.ca)

Rational: topics of course related to the social sustainability and cultural vitality of the indigenous peoples of Canada. Considered an elective course for the Certificate in Sustainability.

## **NS 300 - Traditional Cultural Foundations I**

Introduces students to the diversity of North American Native peoples. Native traditions are treated as aspects of dynamic cultural systems that have enabled Native peoples to survive and thrive in the centuries prior to European arrival, to resist assimilation efforts, and to persist as culturally distinct peoples.

Offered: W15

Instructor: Patricia McCormack [pmccorma@ualberta.ca](mailto:pmccorma@ualberta.ca)

Rational: topics of course related to the social sustainability and cultural vitality of the indigenous peoples of Canada

## **NS 320 - Aboriginal Governments and Politics**

The description, analysis, and principles of various Aboriginal governments will be examined. The relative merits of constitutional, legislative, and administrative options for realizing Aboriginal self-government will be compared. A study of the international and Canadian examples of local and regional Aboriginal governments in practice will be an important focus of this course. Sections may be offered in a Cost Recovery format at an increased rate of fee assessment

Offered: F14, W15

Instructor: Dr. L James Dempsey [jdempsey@ualberta.ca](mailto:jdempsey@ualberta.ca)

Rational: topics of course related to the social sustainability and cultural vitality of the indigenous peoples of Canada

## **NS 330 - Native Economic Development**

This course will review underlying factors which affect the economies of Native communities and examine different approaches to Native Economic development, including community, corporate

and entrepreneurial business approaches. The Native perspective to Native Economic Development will be a principal theme. The objective of the course will be to assess approaches to the identification, planning, and implementation of economic development strategies for Native communities. Prerequisites: NS 110, 111 and 240 or 290 or consent of the Faculty. Sections may be offered in a Cost Recovery format at an increased rate of fee assessment; refer to the Fees Payment Guide in the University Regulations and Information for Students section of the Calendar.

Offered: F15 (2)

Instructor: Kirsten Lindquist [kirstenl@ualberta.ca](mailto:kirstenl@ualberta.ca)

Rational: topics of course related to the social sustainability and cultural vitality of the indigenous peoples of Canada. Considered an elective course for the Certificate in Sustainability.

## **NS 340 - Aboriginal Legal Issues**

A critical overview of Aboriginal legal issues, with particular reference to Alberta and the Northwest Territories. Includes an introduction to customary law and emphasizes the Constitution Acts of Canada, selected federal and provincial legislation, treaties, and major court cases. Prerequisites: NS 110, 111 and 240 or consent of the Faculty. Sections may be offered in a Cost Recovery format at an increased rate of fee assessment; refer to the Fees Payment Guide in the University Regulations and Information for Students section of the Calendar.

Offered: W15, F16

Instructor: Dr. Sean Robertson [sean2@ualberta.ca](mailto:sean2@ualberta.ca)

Rational: topics of course related to the social sustainability and cultural vitality of the indigenous peoples of Canada. Considered an elective course for the Certificate in Sustainability.

## **NS 345 - Management Issues in Native Communities**



The course introduces the major management issues commonly faced by contemporary Native communities, public administration, and business organizations as a result of their unique cultural, social, economic, demographic, and political environment. Students will acquire an orientation to the management process and to modern management theory and practices. In addition, opportunities will be made to develop and practice the managerial skills involved in diagnosis, analysis and resolution of management issues frequently encountered in Native organizations.

Offered: Sp15

Instructor: Colette Arcand [carcand@ualberta.ca](mailto:carcand@ualberta.ca)

Rational: Course examines issues which relate to social and economic sustainability.

## **NS 355 - Native Oral Traditions and Indigenous Knowledge**

This course considers oral traditions as aspects of broader, culturally-defined systems of knowledge, in which stories are vehicles for encoding and transmitting knowledge about the people, their culture, and their history. It focuses on new academic and community-based approaches, as well as the complementarity of oral traditions/Indigenous knowledge and Western science. Students will explore the evolving roles of oral traditions for contemporary Native peoples.

Offered: W16

Instructor: Sean Robertson [sean2@ualberta.ca](mailto:sean2@ualberta.ca)

Rational: topics of course related to the social sustainability and cultural vitality of the indigenous peoples of Canada. considered an elective course for the Certificate in Sustainability

## **NS 372 - Métis Politics**

An examination of various Métis political debates: identity, recognition, nationalism, political organizing, self-governance structures, constitutionalization of rights, and theories of Indigenous politics. Prerequisites: NS 110, 111 and 240 or 290 or consent of the Faculty. Sections may be offered in a Cost Recovery format at an increased rate of fee assessment; refer to the Fees Payment Guide in the University Regulations and Information for Students section of the Calendar.

Offered: W15, F16 (2)

Instructor: Dr. Nathalie Kermoal [nkermoal@ualberta.ca](mailto:nkermoal@ualberta.ca)

Rational: topics of course related to the social sustainability and cultural vitality of the indigenous peoples of Canada. Considered an elective course for the Certificate in Sustainability

## **NS 440 - Indigenous Treaties and Agreements**

An exploration of the historical and contemporary issues associated with treaties. Pre- and post-1867 Indian treaties and modern agreements in Canada will be examined. Prerequisite: One 300-level NS course or consent of the Faculty.

Offered: W16

Instructor: Dr. James L Dempsey [jdempsey@ualberta.ca](mailto:jdempsey@ualberta.ca)

Rational: topics of course related to the social sustainability and cultural vitality of the indigenous peoples of Canada. Considered an elective course for the Certificate in Sustainability

## **NS 441 - Indigenous Land Claims and Agreements**

An exploration of the historical and contemporary issues associated with Indigenous land claims agreements. The background negotiations, and implementation of modern agreements in Canada will be the focus of this course.

Offered: F14, 16

Instructor: Dr. L James Dempsey [jdempsey@ualberta.ca](mailto:jdempsey@ualberta.ca)

Rational: topics of course related to the social sustainability and cultural vitality of the indigenous peoples of Canada. Considered an elective course for the Certificate in Sustainability.

**Faculty of Nursing -  
Sustainability Courses:**

## **NURS 686 - International and Intercultural Perspectives on Health and Nursing**

The focus of this course is on relationships among health, development, globalization and human resources to reduce health inequities and foster social justice. Emphasis will be placed on fostering an appreciation of the meaning of global, epidemiological, demographic, historical, socio-cultural, environmental, economic, and political contexts in relation to the changing pattern in health of populations, the development of nursing and/or other health professions and health services, the impact on delivery and planning of nursing/health care and the nursing/health professions response within the global context.

Offered: W17

Instructor: Dr. Solina Richter [mrichter@ualberta.ca](mailto:mrichter@ualberta.ca)

Rational: Syllabus sent to me by Dr. Pauline Paul. Primary and explicit focus of the course is “on relationships among health, development, globalization and human resources to reduce health inequities and foster social justice”

## **Faculty of Nursing - Courses that include Sustainability:**

### **NURS 685 - Migration and Health in the Canadian Context**

The focus of this course is on critical analysis of issues related to migration and health in the Canadian context. Determinants of health are used as a framework to define relevant topics, explore theoretical perspectives, and incorporate knowledge from a variety of disciplines. Research challenges in conceptualization and implementation of immigrant health projects are explored. The concepts of cultural competence and cultural safety are examined in depth and implications for policy and research are explored.

Offered: F14 (2)

Instructor: Dr. Solina Richter [mrichter@ualberta.ca](mailto:mrichter@ualberta.ca)

Rational: Syllabus sent to me by Dr. Pauline Paul. This course touches on aspects of sustainability and social justice when it comes to issues of access to healthcare.

## Faculty of Pharmacy - Sustainability Courses:

## Faculty of Pharmacy - Courses that include Sustainability:

### **PHARM 453 - Intercultural Exploration of Pharmacy and Health**

This course explores the relationship between culture, diet, lifestyle and health in a Mediterranean environment. Students will examine factors that influence health, including the geo-political, socioeconomic, and cultural factors. Patient care and pharmacist roles in the prevention and/or management of chronic disease are considered.

Offered: Sp15, 16

Instructor: Theresa Charrois [tcharroi@ualberta.ca](mailto:tcharroi@ualberta.ca)

Rational: course explores different aspects of Mediterranean culture which impact health and environment.

## Faculty of Physical Education - Sustainability Courses:

Kinesiology (KIN):

### **KIN 205 - Introduction to Outdoor Environmental Education**

A conceptual and experiential introduction to outdoor environmental education and leadership. In

addition to weekly lecture and lab components, the course includes weekend commitments.

Offered: F16, W17

Instructor: Dr. Sean Ryan [sryan@ualberta.ca](mailto:sryan@ualberta.ca)

Rational: Dr. Janice Causegrove-Dunn recommended this course.

## Physical Education and Sport (PEDS):

### **PEDS 205 - Introduction to Outdoor Environmental Education**

A conceptual and experiential introduction to outdoor environmental education and leadership. In addition to weekly lecture and lab components, the course includes weekend commitments.

Offered: F14, W15, Sp15, F15, W16, Sp16, F16, W17

Instructor: Sean Ryan [sryan@ualberta.ca](mailto:sryan@ualberta.ca)

Rational: considered core course for the Certificate in Sustainability

## Physical Education, Recreation, and Leisure Studies (PERLS):

### **PERLS 204 - Canadian History of Leisure, Sport, and Health**

An introductory examination of Canadian leisure, sport, physical cultures, recreation, tourism, and health, in a global world, since the 19th century. Topics are integrated to understand the past in order to think broadly and critically through historical study of culture and society.

Offered: F14, W15, F15, W16, F16, W17

Instructor: Dr. Pearl-Ann Reichwein [preichwe@ualberta.ca](mailto:preichwe@ualberta.ca)

Rational: Dr. Janice Causegrove Dunn recommended this course.

## Recreation and Leisure Studies (RLS):

## **RLS 463 - Issues in Tourism Development**

Critical issues in tourism development will be examined within the context of tourism transformation models and fundamental development concepts such as commodification, authenticity, globalization, sense of place, economic impact, socio-cultural impact and environmental impact.

Offered: W15, 16, 17

Instructor: Dr. Elizabeth Halpenny [halpenny@ualberta.ca](mailto:halpenny@ualberta.ca)

Rational: Dr. Janice Causegrove Dunn recommended this course. Considered an elective course for the Certificate in Sustainability. Focus of the course is on sustainability impacts of tourism

## **RLS 541 - Parks and Protected Areas: Planning and Management of Natural and Cultural Heritage.**

An interdisciplinary perspective on policy, planning, and management issues associated with parks, protected areas, and the stewardship of natural and cultural heritage. Current issues facing conservation and outdoor recreation agencies will be emphasized. The provision and management of outdoor recreation opportunities within protected areas is also examined.

Offered: F14

Instructor: Dr. Sean Ryan [sryan@ualberta.ca](mailto:sryan@ualberta.ca)

Rational: Dr. Janice Causegrove Dunn recommended this course.

## **Faculty of Physical Education - Courses that include Sustainability:**

Health Education (HE ED):

## **HE ED 320 - Social Dimensions of Health Promotion**

An examination of social policies and systems as they affect health and well-being. A macro level approach to understanding health and health promotion in communities and the population at large.

Offered: W15, 16, 17

Instructor: Dr. Lisa McDermott [lisam@ualberta.ca](mailto:lisam@ualberta.ca)

Rational: Dr. Janice Causegrove Dunn recommended this course.

## **HE ED 321 - Psychological Dimensions of Health Promotion**

An individual-based analysis of health-related behavior and behavior change. Emphasis will be placed upon social psychological approaches to understanding and changing such health-related behaviors as physical activity involvement, dietary practices, smoking, alcohol and drug abuse within a social context.

Offered: W15, Sp15, W16, Sp16, W17

Instructor: Dr. Tanya Berry [tanyab@ualberta.ca](mailto:tanyab@ualberta.ca)

Rational: Dr. Janice Causegrove Dunn recommended this course.

Physical Education, Recreation, and Leisure Studies (PERLS):

## **PERLS 207 - Adapted Physical Activity and Leisure for Diverse Populations**

An introduction to research, theory and practice pertaining to participation in physical activity and leisure by persons with impairments. The course explores the intersection of social influences and personal interests on participation in active lifestyles.

Offered: F14, W15, Sp15, F15, W16, Sp16, F16, W17

Instructor: Dr. Joanna Auger [jclair@ualberta.ca](mailto:jclair@ualberta.ca)

Rational: Dr. Janice Causegrove Dunn recommended this course. Included because it focuses on

accessibility of physical activities and leisure and the social factors that influence this.

## **PERLS 304 - Advanced Sociology of Sport and Leisure**

Building on introductory sociological concepts from PERLS 104 and historical foundations from PERLS 204, the course focuses on developing a critical understanding of the power relations operating through contemporary social and cultural processes that shape the body, sport and leisure, such as colonialism, consumer culture, globalization and neo-liberalism.

Offered: F14, W15, Sp15, F15, W16, F16, W17

Instructor: Dr. Lisa McDermott [lisam@ualberta.ca](mailto:lisam@ualberta.ca)

Rational: Dr. Janice Causegrove Dunn recommended this course. Discusses various topics with significance for social sustainability and equality in sport and leisure.

## **PERLS 323 - Aboriginal Peoples and Physical Practices: Canadian Perspectives**

This course explores ways in which physical practices influence the health of Aboriginal peoples. In this context health is defined as a state of balance involving body, emotions, mind, and spirit. The various forms of physical activity, sport, recreation, and leisure activities in which Aboriginal peoples participate will be examined.

Offered: F14, 15, 16

Instructor: Tara-Leigh McHugh [tmchugh@ualberta.ca](mailto:tmchugh@ualberta.ca)

Rational: Dr. Janice Causegrove Dunn recommended this course.

## **PERLS 504 - The History of Nature, Parks, and Travel**

Examines history at the crossroads of nature, parks, and travel. It concerns the formation of ideas about nature expressed through leisure. Topics include: adventure, exploration, national parks, wildlife conservation, mountaineering, canoeing, wilderness art, recreation, youth movements, urban parks, holidays, cultural heritage, and tourism. Attention is given to the study of Canadian life in the 19th and 20th centuries, along with international tangents.

Offered: W15, 17



Instructor: Dr. Pearl Ann Reichwein [preichwe@ualberta.ca](mailto:preichwe@ualberta.ca)

Rational: Dr. Janice Causegrove Dunn recommended this course.

## **PERLS 506 - Socio-cultural Perspectives on the Body and Health**

Examines contemporary socio-cultural discussions and debates regarding the body as a social phenomenon, with a particular focus on understanding intersections of the body, physical activity, exercise and health. In doing so, questions regarding social construction, representation and regulation of bodies as well as experiences of embodiment will be examined.

Offered: W16

Instructor: Dr. Lisa McDermott [lisam@ualberta.ca](mailto:lisam@ualberta.ca)

Rational: Included because parts of the course discuss intersectional factors which affect topics related to social sustainability.

## **PERLS 507 - Sport and Popular Culture**

An examination of the place of sport in contemporary Canadian popular culture, with three principal aims: 1) To offer an introduction to Cultural Studies and its key concepts; 2) To give students a chance to think about how social difference and inequality work in contemporary Canadian society, and how it is reflected in the world of sport and leisure; and 3) To examine the effects of both cultural and economic globalization on sport and Canadian society.

Offered: F14

Instructor: Dr. Jay Scherer [jscherer@ualberta.ca](mailto:jscherer@ualberta.ca)

Rational: Dr. Janice Causegrove Dunn recommended this course. Topics of the course include "Social difference and inequality in contemporary Canadian society"

Recreation and Leisure Studies (RLS):

## **RLS 100 - Life, Leisure, and the Pursuit of Happiness**

Examination of the nature, characteristics, and functions of leisure in modern Canada. Review of

relationships between leisure and time, play, work, family, education, ethnicity, gender, and environment. Discussion of ideas about conventional leisure, serious leisure, and deviant leisure. Overview of the structure of the Canadian recreation and tourism delivery systems.

Offered: F14, Su15, F15, Su16, F16

Instructor: Elizabeth Halpenny [halpenny@ualberta.ca](mailto:halpenny@ualberta.ca)

Rational: Dr. Janice Causegrove Dunn recommended this course. Topics of the course include "ethnicity, gender, and the environment" as it relates to life, leisure, and happiness

## **RLS 130 - Collaborative Skills and Processes for Community Recreation and Leisure**

Study of the social and political processes through which groups and individuals work to mobilize resources and establish relationships to fulfill individual and community recreation/leisure needs. Basic personal communication and conflict skills for understanding, analyzing, and working through social and political processes will be examined.

Offered: W15, 16, 17

Instructor: Dr. Sean Ryan [sryan@ualberta.ca](mailto:sryan@ualberta.ca)

Rational: Dr. Janice Causegrove Dunn recommended this course. Topics include the social and political processes which underlie community and recreation/leisure needs.

## **RLS 263 - Principles of Tourism**

This course presents an overview and explores the basic principles of the tourism system (tourist, travel, destinations, and marketing), underlying influences such as cultural, social, economic, and psychological aspects, areas of major tourist activity such as natural spaces, constructed facilities, and cultural events, and the impact of tourism upon the attraction, local communities, and national arenas.

Offered: F14, 15, 16

Instructor: Dr. Tom Hinch [thinch@ualberta.ca](mailto:thinch@ualberta.ca)

Rational: Dr. Janice Causegrove Dunn recommended this course. Considered an elective course for the Certificate in Sustainability.

## **RLS 400 - Philosophies of Leisure**

This course examines selected philosophical perspectives related to leisure, recreation, work, play, and quality of life. The course explores the philosophical implications for the recreation profession in Canada and issues related to the future of leisure in Canadian society. Note: Credit will be granted for only one of RLS 300 or 400.

Offered: F14, 15, 16

Instructor: Dr. Judy Davidson [jdavidso@ualberta.ca](mailto:jdavidso@ualberta.ca)

Rational: Considered core course for the Certificate in Sustainability

## **RLS 452 - Parks Planning, Management, and Maintenance**

An examination of parks as recreation environments together with an analysis of the relationship between park planning, design and subsequent management and maintenance in terms of meeting the requirements of the park agency, the park user and the resource base. Attention is focused on both the common themes in park management and the specific problems of parks operation and maintenance associated with particular types of parks contained within a comprehensive park system.

Offered: F14

Instructor: Dr. Tom Hinch [thinch@ualberta.ca](mailto:thinch@ualberta.ca)

Rational: Dr. Janice Causegrove Dunn recommended this course. Considered an elective course for the Certificate in Sustainability.

## **RLS 465 - Natural Area Tourism**

This course examines the different types of tourism that can occur in natural areas (e.g. adventure, nature based, wildlife, ecotourism) from the perspective of tourists, trip organizers and guides, planners and managers, local residents, and indigenous people.

Offered: F16

Instructor: Dr. Howie Harshaw [harshaw@ualberta.ca](mailto:harshaw@ualberta.ca)

Rational: Dr. Janice Causegrove Dunn recommended this course. Touches on aspects of social and environmental sustainability in the impacts of tourism on the environment, local residents, and

indigenous people

### **RLS 497 - Special Topics in Recreation: The Culture of Recreation, Sport and Tourism in Brazil\***

Recreation, sport and tourism provide a window into culture and identity. Underlying values and beliefs are embedded in the practice of these leisure activities. Such practices help to transform space into meaningful places both for residents and for visitors. This course will critically examine these practices in Brazil. The on-site delivery of the course will draw on local community resources to facilitate an authentic experience of and insight into Brazilian culture as manifest in recreation, sport and tourism.

Rational: Dr. Janice Causegrove Dunn recommended this course.

\*Not included for the purposes of STARS credit AC1

### **RLS 510 - Concepts and Theories of Leisure and Recreation**

Concepts, theories, and perspectives of leisure and recreation are examined in relation to the psychological, sociological, cultural, political, and global significance of leisure. Practical implications will also be explored.

Offered: F14, 15, W17

Dana Dragon-Smith recommended this course

**Faculty of Rehabilitation Medicine -  
Sustainability Courses:**

**Faculty of Rehabilitation Medicine -  
Courses that include Sustainability:**

## Occupational Therapy (OCCTH):

### OCCTH 507 - Occupation and Society: Theory and Practice

Theory and philosophies underpinning occupational therapy and occupational science.

Offered: F14 (2), 15 (2), 16 (2)

Instructor: Elly Park [elly1@ualberta.ca](mailto:elly1@ualberta.ca)

Rational: [Syllabus](#), recommended by Bernadette Martin because “social justice is introduced, developed, and applied” in this course as part of the occupational therapy social justice “curriculum stream” in which social justice content “flows through the curriculum and is touched on at various levels within [the] program”

### OCCTH 510 - Theory, Evidence and Skills in Practice: Application

Application of occupational therapy principles and skills, supported by evidence based practice, in physical and mental health, functioning, participation and activities.

Offered: F14 (3), 15 (3), 16 (3)

Instructor: Karin Werther [kwerther@ualberta.ca](mailto:kwerther@ualberta.ca)

Rational: Recommended by Bernadette Martin as this course contains “a virtual clinic where students have to deal with various issues related to social justice as it relates to their clients” as part of the occupational therapy social justice “curriculum stream” in which social justice content “flows through the curriculum and is touched on at various levels within [the] program”

## OCCTH 517 - Foundations of Psychiatry and Mental Health Practice for Occupational Therapists

Foundational knowledge of the description, mechanism and classification of psychiatric phenomenon required for the provision of client centered, evidence-informed occupational therapy with persons experiencing chronic and acute mental illness.

Offered: F14 (2), 15 (2), 16 (2)

Instructor: Dr. Mary Forhan [forhan@ualberta.ca](mailto:forhan@ualberta.ca)

Rational: [Syllabus](#), Recommended by Bernadette Martin as part of the “mental health theme [in which] students are exposed to various issues faced by individuals with mental illness as it relates to social justice” as part of the occupational therapy social justice “curriculum stream” in which social justice content “flows through the curriculum and is touched on at various levels within [the] program”

## OCCTH 518 - Assessment and Interventions for Occupational Therapists in Mental Health Practice

Occupational therapy theories, assessments, and intervention techniques aimed at mental health promotion, illness/injury prevention and facilitation of recovery and occupational performance across the lifespan and settings.

Offered: W15 (2), 16 (2), 17 (2)

Instructor: Dr. Suzette Bremault-Phillips [suzette2@ualberta.ca](mailto:suzette2@ualberta.ca)

Rational: Recommended by Bernadette Martin as part of the “mental health theme [in which] students are exposed to various issues faced by individuals with mental illness as it relates to social justice” as part of the occupational therapy social justice “curriculum stream” in which social justice content “flows through the curriculum and is touched on at various levels within [the] program”

## OCCTH 519 - Enabling Occupation: Advanced Practices in Mental Health

A discussion and analysis of selected topics of current interest in psychiatry as related to occupational therapy practice. Selected complex cases and special populations are addressed.

Offered: F14 (2), 15 (2), 16 (2)

Instructor: Dr. Elizabeth Taylor [et1@ualberta.ca](mailto:et1@ualberta.ca)

Rational: Recommended by Bernadette Martin as part of the “mental health theme [in which] students are exposed to various issues faced by individuals with mental illness as it relates to social justice” as part of the occupational therapy social justice “curriculum stream” in which social justice content “flows through the curriculum and is touched on at various levels within [the] program”

## OCCTH 520 - Theory, Evidence and Skills in Practice: Integration

Case based clinical reasoning to integrate occupational therapy theory and values in the selection of intervention media and modalities for physical and mental health, functioning, participation, and activities.

Offered: W15 (3), 16 (3), 17 (3)

Instructor: Karin Werther [kwerther@ualberta.ca](mailto:kwerther@ualberta.ca)

Rational: Recommended by Bernadette Martin as this course contains “a virtual clinic where students have to deal with various issues related to social justice as it relates to their clients” as part of the occupational therapy social justice “curriculum stream” in which social justice content “flows through the curriculum and is touched on at various levels within [the] program”

## OCCTH 530 - Theory, Evidence and Skills in Practice: Synthesis

The use and design of interventions for physical and mental health, functioning, participation, and activities supported by the analysis and synthesis of occupational therapy principles.

Offered: F14 (3), 15 (3), W16, F16 (3)

Instructor: Karin Werther [kwerther@ualberta.ca](mailto:kwerther@ualberta.ca)

Rational: Recommended by Bernadette Martin as this course contains “a virtual clinic where students have to deal with various issues related to social justice as it relates to their clients” as part of the occupational therapy social justice “curriculum stream” in which social justice content “flows through the curriculum and is touched on at various levels within [the] program”

## OCCTH 540 - Theory, Evidence and Skills in Practice Evaluation

Application and evaluation of occupational therapy intervention media and modalities for physical and mental health functioning, participation, and activities.

Offered: W15 (3), 16 (3), 17 (3)

Instructor: Karioccn Werther [kwerther@ualberta.ca](mailto:kwerther@ualberta.ca)

Rational: Recommended by Bernadette Martin as this course contains “a virtual clinic where students have to deal with various issues related to social justice as it relates to their clients” as part of the occupational therapy social justice “curriculum stream” in which social justice content “flows through the curriculum and is touched on at various levels within [the] program”

## OCCTH 558 - Enabling Occupation: Community

Application and integration of occupational therapy principles and practice in community settings. The focus is on complex care and chronic degenerative conditions.

Offered: W15 (2), Sp16 (2)

Instructor: Professor Sharon Brintnell [esb1@ualberta.ca](mailto:esb1@ualberta.ca)

Rational: Recommended by Bernadette Martin as this capstone course “has a strong social justice component where students must develop community-based programs considering inequality and marginalized communities” as part of the occupational therapy social justice “curriculum stream” in which social justice content “flows through the curriculum and is touched on at various levels within [the] program”

## Physical Therapy (PTHER):

### PTHER 524 - Professional Issues I

Introduction to physical therapy including theory and concepts of rehabilitation science. Content will include communication, professional ethics and conduct, disability issues, models of disablement, client centered principles and self-reflection. A model of practice and clinical decision making will be presented.

Offered: F14 (3), F15 (3), F16 (3)

Instructors: Barbara Norton [bnorton@ualberta.ca](mailto:bnorton@ualberta.ca)

Rational: Recommended by Bernadette Martin: “Course content related to:



- 
- Explain the International Classification of Functioning, Disability and Health (ICF) and, given a scenario, identify the appropriate dimension of disablement
- 5. Explain the Canada Health Act and the Health Professions Act in Alberta and their influence on physical therapy service delivery.
- Explain the ethical principles of autonomy, beneficence, non-maleficence, veracity, confidentiality, justice and respect and apply these principles to scenarios requiring ethical decision making pertinent to physical therapy interventions
- 
- Appreciate the multiple factors (external context) that influence clinical practice of physical therapy, including ethics, regulations, environmental factors, disability and culture and recognize the need to modify behavior appropriately.”

## **PTHER 525 - Professional Issues II - Health Care, Ethics and Medical-Legal Issues**

Credit. Continuation of the study of professional issues relevant to the practice of physical therapy. Ethical, cultural, medical-legal and regulatory issues and their impact on professional practice. Prerequisites: INT D 410 and PTHHER 524.

Offered: Su15, 16

Instructor: Christopher Zarski [zarski@ualberta.ca](mailto:zarski@ualberta.ca)

Rational: Recommended by Bernadette Martin: “An introduction to Global Health issues and Health Promotion principles in physical therapy will be included

- - . Report elements of general health law and jurisprudence and their influence on
  - physical therapy clinical practice
  - 4. Interpret elements of selected global health issues including determinants of health
  - and cultural competence and their relevance to physical therapy.
  - 5. Analyze and discuss selected issues in the field of disability studies and health promotion.
  - 6. Critically analyze, through online discussion questions and summary, professional
  - issues cases, scenarios or topics from the multiple perspectives presented in this
  - course (health law {negligence, liability, informed consent}, disability as a human
    - rights/ethical issue, PT regulatory issues, health promotion and global health); accurately interpreting information, identifying salient points, evaluating obvious alternative points of view, drawing reasonable conclusions, providing justification for action plans in a

fair- minded and appropriate manner.

- Possess a heightened awareness of disability and human rights, cultural competence, health promotion, patient education and global health issues for application in practice.”

## **PTHER 526 - Professional Issues III - Business and Professional Responsibility in Physical Therapy**

Administrative issues in the public and private health care sectors will focus on impact of health policy, payment systems, funding proposals and business planning and ethics. Professional responsibilities in professional practice will emphasize supervision of physical therapy students and therapist assistants and continuing competency. Prerequisite: PTHER 525.

Offered: F14 (3), 15 (3), 16 (3)

Instructors: Prof Bernadette Martin [bm4@ualberta.ca](mailto:bm4@ualberta.ca)

Rational: Recommended by Bernadette Martin:

“1. Relate the learning regarding professionalism (i.e. professional responsibility, life-long learning and behavior) from this course to the concepts and terms of the C.O.Rx.E., Clinical Decision-making models and Essential Competency Profile for Physiotherapists in Canada (2009).

2. Understand how health policy, standards of practice and quality protocols impact and guide physical therapy practice

9. Understand the opportunities and responsibilities for a PT working with the public and the media.

10. Develop strategies to manage one’s own wellness. Identify the signs of compassion fatigue and be aware of actions for prevention and/or addressing provider burnout or secondary trauma stress in practice.”

Rehabilitation Medicine (REHAB):

## **REHAB 546 - Sex Positivity: In Theory and Practice**

This course will give students a better understanding of the importance of using a sex-positive approach with clients. The course will explore what shapes an individual's sexual morals, values, and beliefs. The impact of religion, culture, media, and the law on sexuality will be emphasized.

This course will help students become more aware of their sexual attitudes and offer strategies to become more effective sexual health practitioners. Prerequisite: REHAB 544. Sections offered in a Cost Recovery format at an increased rate of fee assessment; refer to the Fees Payment Guide in the University Regulations and Information for Students.

Offered: W17

## School of Public Health - Sustainability Courses:

### **SPH 514 - Introduction to Environmental Health**

Introduces environmental health issues and scientific understanding of their causes in developed and developing countries. Examines the role of environmental factors (biological, chemical, and physical) and its importance in relation to other factors that affect health of a community. Provides case studies of how environmental factors are dealt with in practice; including methods and approaches for assessment, prevention, and control.

Offered: F14 (2), W15, F15, W16, F16, W17

Instructor: Patrick Hannington [pch1@ualberta.ca](mailto:pch1@ualberta.ca)

## School of Public Health - Courses that include Sustainability:

Health Promotion Studies (HPS):

### **HPS 510 - Health Promotion with Communities**

In this course, learners focus on people taking collective action to influence change. Comprehensive strategies for promoting health are examined and analyzed by example, framed by "empowerment" education, creating supportive environments, strengthening community action and advocating for healthy policies. Learners explore questions and challenges in applying health promotion principles, concepts and theories to practice at the community level. The value of democratic approaches to decision-making is an underlying premise for this course.

Offered: W15

Instructor: Ann Goldblatt [anng@ualberta.ca](mailto:anng@ualberta.ca)

Rational: community health is a central challenge for social sustainability

## Public Health Sciences (PHS):

### **PHS 416 - One-Health**

"One Health" is an emerging paradigm in public and veterinary health which recognizes that human, animal and environmental health are interlinked. The course will address food and water safety, the increase in prevalence of antibiotic resistant organisms, emerging infectious zoonotic diseases, environmental protection and environmental sustainability, emphasizing the interaction of these diverse yet interconnected disciplines in protecting the health of populations. Lectures are the same as for SPH 416, but with additional assignments and evaluation appropriate to graduate studies. Note: Credit may not be obtained for both PHS 516 and SPH 516. Credit will only be given for one of AFNS 416, 516 or SPH 416, 516. Prerequisite: consent of Instructor.

Offered: W15

Instructor: Dr. Judd Aiken [jmaiken@ualberta.ca](mailto:jmaiken@ualberta.ca)

Rational: recommended by Linda Carroll

Cross-listed

### **PHS 504 - Advocacy for Public Health**

This course is designed to introduce the student to the exciting world of public health advocacy and reflect the realities health policy in Canada today. It is expected that the class will become actively engaged in one of several group projects to develop an advocacy campaign.

Offered: F14

Instructor: Les Hagen [hagen@ualberta.ca](mailto:hagen@ualberta.ca)

Rational: community health is a central challenge for social sustainability

## **PHS 511 - Environmental Contaminant Exposure Assessment**

Principles and practice of monitoring exposure to environmental contaminants, external and internal dose. Biomarkers for environmental contaminant dose estimation. Environmental and biological sampling. Routes of exposure, absorption, and distribution. Note: Credit may not be obtained for both PHS 511 and SPH 511.

Offered: F14

Instructor: Prof Warren Kindzierski [warrenk@ualberta.ca](mailto:warrenk@ualberta.ca)

## **PHS 512 - Environmental Risk Assessment and Management**

Concepts of risk to health and environment, assessment, management and communication of risk, hazard identification, links to exposure assessment, toxicology and epidemiology, dose response assessment, risk characterization, regulatory and policy science. Note: Credit may not be obtained for both PHS 512 and SPH 512.

Offered: W15

Instructor: Prof Warren Kindzierski [warrenk@ualberta.ca](mailto:warrenk@ualberta.ca)

School of Public Health (SPH):

## **SPH 500 - Introduction to Health Policy and Management**

The course provides an overview of the development, organization, financing, delivery and management of the Canadian health system. Students will examine the health care system's central assumptions, the distribution of power and authority within the system, current debates about the system's future, and the potential for political action. Recognizing that the existing health care system is the result of power struggles and contestable political choices, the lectures and readings will encourage students to think critically about health care policy in Canada. By the end of the course, students should be formulating their own opinions about future directions for health care. May contain alternate delivery sections; refer to the Fees Payment Guide in the University Regulations and Information for Students section of the Calendar.

Offered: F14 (2), 15 (2), 16 (2)

Instructor: Aslam Bhatti [abhatti1@ualberta.ca](mailto:abhatti1@ualberta.ca) , Elaine Hyshka [ehyshka@ualberta.ca](mailto:ehyshka@ualberta.ca) , Stephanie Montesanti [montesan@ualberta.ca](mailto:montesan@ualberta.ca)

Rational: community health is a central challenge for social sustainability

cross-listed

## SPH 501 - Determinants of Health

Students will be expected to apply knowledge of selected social determinants of health to multi-level interventions to improve health of individuals, communities, and populations. The course takes an ecological approach to the analysis of health needs and the design of public health actions. Students will apply key social science theories to the analysis of social determinants of health. May contain alternate delivery sections; refer to the Fees Payment Guide in the University Regulations and Information for Students section of the Calendar.

Offered: F14 (2), F15 (3), F16 (2)

Instructor: Lori Baugh Littlejohns [lkb2@ualberta.ca](mailto:lkb2@ualberta.ca) & Jacqueline Torti [torti@ualberta.ca](mailto:torti@ualberta.ca)

community health is a central challenge for social sustainability

## SPH 505 - Fundamentals of Public Health

This course provides an overview of the various disciplines making up and impacting on public health. Discussions will cover the Canadian health care system, infectious and chronic disease epidemiology and control, environmental health, occupational health, health care evaluation, disease prevention, health promotion, and disease and exposure assessment. Note: Credit may not be obtained for both PHS 505 and SPH 505.

Offered: F14

Instructor: Dr. Padma Kaul [pkaul@ualberta.ca](mailto:pkaul@ualberta.ca) & Qendresa Beka [beka@ualberta.ca](mailto:beka@ualberta.ca)

Rational: community health is a central challenge for social sustainability

## SPH 510 - Health Promotion with Communities

In this course, learners focus on people taking collective action to influence change. Comprehensive strategies for promoting health are examined and analyzed by example, framed by "empowerment" education, creating supportive environments, strengthening community action and advocating for healthy policies. Learners explore questions and challenges in applying health promotion principles, concepts and theories to practice at the community level. The value of democratic approaches to decision-making is an underlying premise for this course.

Offered: W15, 16, 17

Instructor: Ann Goldblatt [anng@ualberta.ca](mailto:anng@ualberta.ca)

Rational: community health is a central challenge for social sustainability

## **SPH 511 - Environmental Contaminant Exposure Assessment**

Principles and practice of monitoring exposure to environmental contaminants, external and internal dose. Biomarkers for environmental contaminant dose estimation. Environmental and biological sampling. Routes of exposure, absorption, and distribution. Note: Credit may not be obtained for both PHS 511 and SPH 511.

Offered: F14, 15, 16

Instructor: Prof Warren Kindzierski [warrenk@ualberta.ca](mailto:warrenk@ualberta.ca)

Rational: community health is a central challenge for social sustainability

## **SPH 512 - Environmental Risk Assessment and Management**

Concepts of risk to health and environment, assessment, management and communication of risk, hazard identification, links to exposure assessment, toxicology and epidemiology, dose response assessment, risk characterization, regulatory and policy science. Note: Credit may not be obtained for both PHS 512 and SPH 512.

Offered: W15, 16, 17

Instructor: Prof Warren Kindzierski [warrenk@ualberta.ca](mailto:warrenk@ualberta.ca)

## **SPH 516 - One-Health**

"One Health" is an emerging paradigm in public and veterinary health which recognizes that human, animal and environmental health are interlinked. The course will address food and water safety, the increase in prevalence of antibiotic resistant organisms, emerging infectious zoonotic diseases, environmental protection and environmental sustainability, emphasizing the interaction of these diverse yet interconnected disciplines in protecting the health of populations. Lectures are the same as for SPH 416, but with additional assignments and evaluation appropriate to graduate studies. Note: Credit may not be obtained for both PHS 516 and SPH 516. Credit will only be given for one of AFNS 416, 516 or SPH 416, 516. Prerequisite: consent of Instructor.

Offered: W15, 16, 17

Instructor: Dr. Judd Aiken [jmaiken@ualberta.ca](mailto:jmaiken@ualberta.ca)

Rational: recommended by Linda Carroll

Cross-listed

## **SPH 640 - Introduction to Global Health**

The aim of this course is to enable students to increase their understanding of historical and current determinants of global health and of the interventions to reduce global health inequities. Note: Credit may not be obtained for both PHS 640 and SPH 640.

Offered: F14, 15, 16

Instructor: Stephanie Yanow [yanow@ualberta.ca](mailto:yanow@ualberta.ca)

Rational:

# Faculty of Science - Sustainability Courses:

Biology (BIOL):



## **BIOL 367 - Conservation Biology**

This course introduces the principles of conservation biology with an emphasis on ecological processes operating at population, community and ecosystem levels of organization. Threats to biological diversity, ranging from species introductions to habitat destruction will be discussed along with conservation solutions ranging from the design of protected areas through conservation legislation.

Offered: F14, Sp15, F15, W16, Sp16, F16

Instructor: Dr. Colleen St Clair [cstclair@ualberta.ca](mailto:cstclair@ualberta.ca) & Scott Wilson [sjw@ualberta.ca](mailto:sjw@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

## **BIOL 381 - A Planet in Crisis**

This course examines how humankind's collective activities, including altering the climate, have significantly affected the natural planetary balance. We will discuss human population growth and unsustainable resource use; the movement of pollutants through the atmosphere, hydrosphere and biosphere; the impacts these stressors have on ecosystem services and human health; and how certain impacts have been and can be mitigated by environmental policies and laws. Groups of students will produce a short video documentary on a topic related to how humans impact their environment.

Offered: F14, 15, 16

Instructor: Dr. Vincent St Louis [vstlouis@ualberta.ca](mailto:vstlouis@ualberta.ca) & Anjolene Hunt [anjolene@ualberta.ca](mailto:anjolene@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

## **BIOL 384 - Global Change and Ecosystems**

Ecological impacts of climate change and large-scale human activities on terrestrial and aquatic ecosystems. The focus of this course is to learn to write brief technical summaries of current environment issues, in a fashion that can be understood by an educated citizen. Topics such as climate change, water management projects, invasion of exotic species and national parks management are presented as the forum to evaluate options, trade-offs and solutions to environmental social issues.

Offered: W15, 16, 17

Instructor: Dr. Sally Leys [sleys@ualberta.ca](mailto:sleys@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

Geophysics (GEOPH):

## **GEOPH 223 - Environmental Geophysics**

Near surface geophysical imaging techniques with focus on applications in hydrogeology, glaciology and environmental studies; rock properties; imaging methods covered include: shallow seismic exploration, magnetic exploration, radiometric techniques, electrical resistivity tomography (ERT); electromagnetic (EM) methods; ground penetrating radar (GPR), application to environmental monitoring, climate change, environmental legislation.

Offered: F14, 15, 16

Instructor: Dr. Claire Currie [ccurrie1@ualberta.ca](mailto:ccurrie1@ualberta.ca)

# Faculty of Science - Courses that Include Sustainability:

Biology (BIOL):

## **BIOL 208 - Principles of Ecology**

Ecology is the scientific study of interactions between organisms and their environment in a hierarchy of levels of organization: individuals, populations, communities, and ecosystems. Provides a comprehensive survey of general concepts that can stand alone or serve as preparation for advanced courses in ecology. Labs emphasize collection, analysis, and interpretation of data from ecological experiments and field studies to illustrate and complement lecture material. Examples are drawn from a broad range of organisms and systems.

Offered: F14, W15, Sp15, F15, W16 (2), Sp16, F16, W17

Instructor: Audrey Reid [ahreid@ualberta.ca](mailto:ahreid@ualberta.ca)

Rational: considered a core course for the Certificate in Sustainability

## **BIOL 333 - Wetland Ecology and Management**

Introduction to the ecology of wetland ecosystems, communities and plants. Major topics include landscape features, hydrological and chemical cycles of wetlands, wetland communities and major flora and fauna. Emphasis will be on wetlands in Western Canada including the bog, fen and marsh systems in boreal Alberta, prairie and montane wetlands. Loss or alteration of wetlands due to human activity is documented. A field trip is required.

Offered: F14, 15, 16

Instructor: Dr. Kevin Devito [kdevito@ualberta.ca](mailto:kdevito@ualberta.ca) & Dr. David Olefeldt [olefeldt@ualberta.ca](mailto:olefeldt@ualberta.ca)

Rational: ecology and environmental sustainability

## **BIOL 340 - Global Biogeochemistry**

An introduction to biogeochemical cycles in the environment. Discusses processes and reactions governing cycles in the atmosphere, lithosphere, terrestrial ecosystems, freshwater wetlands and lakes, river estuaries, and the oceans. Outlines the global cycles of water, carbon, nitrogen, phosphorus, and sulfur. **Group discussions will incorporate current topics in anthropogenic alterations of natural cycles that lead to ecosystem degradation.**

Offered: W15, 16, 17

Instructor: Dr. Vincent St Louis [vstlouis@ualberta.ca](mailto:vstlouis@ualberta.ca)

## **BIOL 341 - Ecotoxicology**

**An overview of the adverse effects of chemicals or physical agents on biological systems in an ecological context.** This course takes a multidisciplinary approach to understanding biological effects and their assessment.

Offered: W15, 16, 17

Instructor: Lindsey Felix [lfelix@ualberta.ca](mailto:lfelix@ualberta.ca) & Yueyang Zhang [yueyang5@ualberta.ca](mailto:yueyang5@ualberta.ca)

## **BIOL 366 - Northern Ecology**

Examines the ecology of boreal, arctic, and alpine ecosystems, including postglacial history, climate, geology, nutrient cycling and energy flow in forests, wetlands, lakes and marine systems, animal and plant **adaptations to cold and current human impacts.**

Offered: W15, Sp15, W16, Sp16, W17

Instructor: Dr. Andrew Derocher [derocher@ualberta.ca](mailto:derocher@ualberta.ca)

## **BIOL 540 - Advanced Watershed Ecohydrology**

The course will introduce students to theory and techniques employed in the analysis of physical, hydrological, chemical, and ecological properties of ecosystems using a watershed (catchment) approach. Focus will be on landscape approaches relating interactions or linkages between upland, wetland/riparian, and surface-water in the study of the natural ecohydrologic function and response to disturbance of watershed ecosystems. Emphasis will be placed on Boreal Alberta. Topics are covered through reading the literature and group discussions. Seminars are the same as for BIOL 440, but with additional assignments and evaluation appropriate to graduate studies. Prerequisite: consent of instructor.

Offered: W15, 16, 17

Instructor: Dr. Kevin Devito [kdevito@ualberta.ca](mailto:kdevito@ualberta.ca)

Botany (BOT):

## **BOT 330 - Biodiversity and Ecosystem Function of Algae**

The remarkable biodiversity of algae provides the foundation for most aquatic ecosystems around the world. This course emphasizes the evolution, taxonomy, and ecology of major groups of algae to illustrate relationships between their form and function in pristine and polluted environments. Laboratories will focus on the taxonomic diversity of algae through the use of field surveys of local streams and lakes, and experiments using our extensive algal culture collection.

Offered: W15, W17

Instructor: Dr. Rolf Winebrooke [rolf@ualberta.ca](mailto:rolf@ualberta.ca)

Chemistry (CHEM):

## **CHEM 303 - Environmental Chemistry I**

The chemistry of environmental processes. Atmospheric chemistry; thermal and photochemical reactions of atmospheric gases including oxygen, ozone, hydroxy radical, and oxides of nitrogen and sulfur. Aquatic chemistry; characterization, reactions, and equilibria of dissolved species, water purification treatments. Metals and organohalides in the environment. Risk assessment.

Offered: F14, 15, 16

Instructor: Dr. Wolfgang Jaeger [wjaeger@ualberta.ca](mailto:wjaeger@ualberta.ca)

Rational: **recommended** by Christie McDermott

## **CHEM 305 - Environmental Chemistry II**

The lecture and laboratory portions of this course will highlight adsorption from aqueous solutions, convective/diffusive transport, vapor/solution equilibria, coagulation of colloids, sedimentation, ion exchange, computer modeling of complex systems, trace analysis of pesticides, chemical treatment of hazardous wastes. Quantitative calculations will be emphasized. The lecture component will provide theoretical background for experiments and instrumentation used for chemical measurements.

Offered: W15, 16, 17

Instructor: Sarah Styler [sstyler@ualberta.ca](mailto:sstyler@ualberta.ca)

Rational: recommended by Christie McDermott

## **CHEM 333 - Inorganic Materials Chemistry**

Fundamentals of the synthesis, structure and properties of inorganic solids, thin films, and nanoscale materials, to be complemented with case studies of modern applications of inorganic materials; selected topics such as catalysis, molecular and nanoparticle-based computing, telecommunications, alternative energies, superconductivity, biomedical technologies, and information storage will be discussed. Techniques for characterization and analysis of materials on

the nano and atomic level will be introduced.

Offered: W15, 16, 17

Instructor: Jilian Buriak [jburiak@ualberta.ca](mailto:jburiak@ualberta.ca)

Rational: recommended by Christie McDermott

## **CHEM 436 - Synthesis and Applications of Inorganic and Nano-materials**

Introduction to methods of synthesizing inorganic materials with control of atomic, meso- and micro-structure. Topics include sol-gel chemistry, chemical vapor deposition, solid state reactions, solid-state metathesis and high-temperature self-propagating reactions, template directed syntheses of micro and mesoporous materials, micelles and colloids, synthesis of nanoparticles and nanomaterials. Applications of these synthetic techniques to applications such as photonic materials, heterogeneous catalysts, magnetic data storage media, nanoelectronics, display technologies, alternative energy technologies, and composite materials will be discussed.

Offered: F14, 15

Instructor: Jilian Buriak [jburiak@ualberta.ca](mailto:jburiak@ualberta.ca)

Rational: recommended by Christie McDermott

Earth and Atmospheric Sciences (EAS):

## **EAS 100 - Planet Earth**

Introduction to the origin and evolution of the Earth and the solar system. Introduction to plate tectonics and the rock cycle. Simple energy balances and interactions between radiation and the atmosphere, land, oceans, ice masses, and the global hydrological cycle. Evolution of life, biogeography, and global climate in the context of geologic time. The carbon cycle. Human interaction with the Earth. Mineral and energy resources.

Offered: F14 (3), W15 (2), Sp15, F15, W16, F16, W17

Instructor: Solweig Balzar [sbalzer@ualberta.ca](mailto:sbalzer@ualberta.ca)

Rational: recommended by Stephen Johnston. Considered an elective course for the Certificate in Sustainability.

## **EAS 200 - Introductory Studies in Earth Science**

Laboratory study of topics in introductory Earth Science.

Offered: F14, W15, F15, W16, F16, W17

Instructor: Dr. Frederick Clark [fclark@ualberta.ca](mailto:fclark@ualberta.ca)

Rational: recommended by Stephen Johnston

## **EAS 204 - Environment Alberta**

The physical environment of Alberta. Regional variation in the patterns of climate, landforms, water, soils, vegetation and wildlife; the geographic synthesis of these patterns to give a broad understanding and appreciation of the province and its environmental problems.

Offered: W15, F16

Instructor: Dr. Daniel Alessi [alessi@ualberta.ca](mailto:alessi@ualberta.ca)

Rational: recommended by Stephen Johnston

## **EAS 205 - Environment Earth**

General introduction to interactions between people and their natural environment, with an emphasis on geological processes. Topics include: soil resources and degradation; earthquakes and volcanoes; streams and flooding; landslides, mass movement and subsidence, shoreline development and coastal processes; surface water and groundwater resources; air and water pollution; waste management and disposal; and global change.

Offered: F14, W15, F15, W16, F16, W17

Instructor: Solweig Balzer [sbalzer@ualberta.ca](mailto:sbalzer@ualberta.ca)

Rational: recommended by Stephen Johnston

## **EAS 207 - Mass Extinctions and Dinosaurs**

A discussion and description of the progression of life through time, with emphasis on important radiations and mass extinctions of life, and theories on why they occur. Evolution, radiation, morphology and life habits of dinosaurs are considered in detail. The evidence for asteroid impacts in the geologic record, their frequency and effect on the history of organisms through time. Origin and evolution of humans, and their impact on the biosphere.

Offered: F14, 15, 16

Instructor: Dr. Frederick Clark [fclark@ualberta.ca](mailto:fclark@ualberta.ca)

Rational: portion of the course is on impact of humans on the biosphere

## **EAS 208 - Introduction to Global Change**

Natural and anthropogenic causes of global scale environmental change; the role of the atmosphere, oceans, biosphere and cryosphere in the processes of environmental change; relationships between levels of technology and development and the character of environmental change associated with human activity.

Offered: F14, 15, 16

Instructor: Dr. Alberto Reyes [areyes@ualberta.ca](mailto:areyes@ualberta.ca)

Rational: recommended by Stephen Johnston. Considered an elective course for the Certificate in Sustainability.

## **EAS 215 - Introduction to Arctic Environments and Climate**

Students will learn about the circumpolar North, starting with an overview of regional geography, and then focusing on the cryosphere (ice), atmosphere and ocean of the region. Students will learn why the Arctic is cold and ice covered, and how that impacts its climate and ecosystems. Topics will also include present-day climate change, the processes driving it, and evidence for it in the Arctic, as well as its implications in the rapidly evolving North.

Offered: F16, W17

Instructor: Dr. Paul Myers [pmyers@ualberta.ca](mailto:pmyers@ualberta.ca) & Yarisbel Garcia [yarisbel@ualberta.ca](mailto:yarisbel@ualberta.ca)



## **EAS 250 - Biogeography**

The factors controlling global distribution of plants and animals will be covered from ecological and historical perspectives. Techniques for the analysis of biogeographic patterns, including paleoecology, remote sensing, and phylogenetics. Ecosystem responses to global change, including species migration, disturbance ecology, and invasions.

Offered: W15, 16, 17

Instructor: Martin Sharp [msharp@ualberta.ca](mailto:msharp@ualberta.ca)

Rational: recommended by Stephen Johnston

## **EAS 351 - Environmental Applications of Geographical Information Systems**

This course emphasizes the applications of Geographic Information Systems (GIS) to the environmental sciences. Examples from resource management and the earth and biological sciences are discussed. Labs impart technical experience with ARC/INFO.

Offered: F14, 15, 16

Instructor: Michael Hesketh [hesketh@ualberta.ca](mailto:hesketh@ualberta.ca)

Rational: recommended by Stephen Johnston

## **EAS 354 - Environmental Earth Science Field School**

Introduction to fieldwork in geomorphology, biogeography and microclimatology. Elementary field mapping, the use of electronic field instrumentation for hydrological, water quality and micro-climatological monitoring, mapping and analysis of vegetation patterns, and techniques for the field description and laboratory analysis of soils and sediments. Introductory lectures and ten days of fieldwork.

Offered: W15, 16, 17

Instructor: Martin Sharp [msharp@ualberta.ca](mailto:msharp@ualberta.ca) & Arturo Sanchez-Azofeifa [gasanche@ualberta.ca](mailto:gasanche@ualberta.ca)

Rational: recommended by Stephen Johnston

## **EAS 364 - Petroleum Geology and Subsurface Methods**

Source rocks and origin of petroleum; principles of fluid migration; reservoir rocks and traps. Exploration and development of hydrocarbon plays using subsurface techniques. Introduction to reservoir evaluation, and hydrocarbon production.

Offered: W15, 16, 17

Instructor: Frederick Clark [fclark@ualberta.ca](mailto:fclark@ualberta.ca) & Murray Gingras [mgingras@ualberta.ca](mailto:mgingras@ualberta.ca)

Rational: recommended by Stephen Johnston

## **EAS 373 - The Climate System**

An examination of the physical processes influencing global climate. Radiation and energy in the climate system, the hydrological cycle, general circulation of the atmosphere and ocean, climate feedback mechanisms, climate history and climate change, introduction to climate models.

Offered: W15, 16, 17

Instructor: Dr. Andrew Bush [abush@ualberta.ca](mailto:abush@ualberta.ca)

## **EAS 425 - Contaminant Hydrogeology**

An introduction to the principles of groundwater chemistry, the chemical evolution of natural groundwater flow systems, sources of contamination, and mass transport processes. Hydrogeological aspects of waste disposal and groundwater remediation.

Offered: F14, 15, 16

Instructor: Dr. Daniel Alessi [alessi@ualberta.ca](mailto:alessi@ualberta.ca)

## **EAS 457 - Global Change**

Major processes of change in the contemporary environment, their history and their interrelationships (climate and sea level change, changes in atmospheric composition,

deforestation, desertification, water resource depletion, soil erosion, atmospheric and aquatic pollution); global biogeochemical cycles and their role in environmental change.

Offered: W15, 16 17

Instructor: Dr. K Muehlenbachs [kmuehlen@ualberta.ca](mailto:kmuehlen@ualberta.ca)

Rational: recommended by Stephen Johnston

## Entomology (ENT):

### **ENT 222 - Insects in Managed Ecosystems**

An introduction to insects and related arthropods emphasizing aspects of their structure, life history and ecology responsible for their importance as pest or beneficial organisms in managed landscapes. **Principles of integrated pest management of insects of importance** to Albertan and North American agricultural, horticultural and forested ecosystems will be discussed. Students will gain practical experience in identification of pest and beneficial insects.

Offered: W17

Instructor: Dr. Maya Evenden [mevenden@ualberta.ca](mailto:mevenden@ualberta.ca)

## Genetics (GENET):

### **GENET 424 - Ethical Issues in Genetics**

A seminar and discussion course where students will use their existing knowledge of genetics to investigate, evaluate, and discuss how the field of genetics affects society. Students participate in classroom presentations, written submissions and discussions that may include medical research ethics, genetically modified organisms (GMOs), gene patenting, and other current topics. Enrollment is limited and is by permission of the instructor(s).

Offered: W15, 16, 17

Instructor: Dr. John Locke [jlocke@ualberta.ca](mailto:jlocke@ualberta.ca) & Dr. Heather McDermid [hmcdermi@ualberta.ca](mailto:hmcdermi@ualberta.ca)

## Microbiology (MICRB):

## **MICRB 491 - Environmental Microbiology**

Interactions between microorganisms and the environment. Topics include methods of sampling various environments, methods for monitoring microbial activities, petroleum microbiology, bioremediation, survival of airborne microorganisms, microbial metabolism of selected pollutants.

Offered: F14

Instructor: Julia Foght [foght@ualberta.ca](mailto:foght@ualberta.ca)

## **MICRB 492 - Environmental Microbiology Laboratory**

Laboratory experiments use culture, molecular, chemical and microscopy-based methods for identifying, enumerating and characterizing the activity of microbes from aquatic and terrestrial environments. Bacterial communities involved in petroleum biodegradation, activity assays for industrially and environmentally important microbial products, and ecological processes such as biogeography are also studied. Presence in the laboratory may occasionally be required outside of the regularly scheduled lab section.

Offered: W15

## **MICRB 591 - Advanced Environmental Microbiology**

Interactions between microorganisms and their environment. Topics include methods of sampling various environments, methods for monitoring microbial activities, petroleum microbiology, bioremediation, survival of airborne microorganisms, microbial metabolism of selected pollutants. Lectures and exams are the same as MICRB 491, but preparation of a major term paper and an oral presentation are required. Prerequisite: consent of instructor. Credit cannot be obtained for both MICRB 491 and 591.

Offered F14

Instructor: Julia Foght [foght@ualberta.ca](mailto:foght@ualberta.ca)

Physics (PHYS):

## **PHYS 114 - Physics: The Big Picture**

A qualitative and mostly non-mathematical course in which the overall structure and main concepts of physics are examined. Classical versus quantum worlds; order versus chaos; Newton's versus Einstein's universe; selected topics and issues in modern physics.

Offered: F14, 15, 16

Instructor: Dr. A Meldrum [ameldrum@ualberta.ca](mailto:ameldrum@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

## **PHYS 261 - Physics of Energy**

Energy in its various forms; conservation of energy; basic thermodynamics of ideal gases and phase changes; heat engines and refrigerators; consumption of energy resources; space heating and heat transfer; radioactivity; nuclear fission and nuclear power; **alternative and renewable energy resources.**

Offered: F14, 15, 16

Instructor: Maya Wheelock [wheelock@ualberta.ca](mailto:wheelock@ualberta.ca)

## **PHYS 364 - Environmental Physics II**

Calculation of pollutant concentrations using principles of materials balance; vertical variation of pressure and temperature in the atmosphere; atmospheric stability and the dispersal of air pollutants; water vapor and humidity; blackbody radiation and Earth's global energy balance; molecular absorption of electromagnetic radiation; the ozone problem; the radon problem.

Offered: W15, 17

Instructor: Dr. James Pinfeld [jpinfeld@ualberta.ca](mailto:jpinfeld@ualberta.ca)

Psychology (PSYCO):

## **PSYCO 282 - Behavior Modification**

A study of applications of learning principles and laboratory findings to behavior problems in educational, clinical, and social settings, with emphasis on empirical research demonstrating the effectiveness of behavior modification and cognitive/behavioral techniques.

Offered: F14, W15, Sp15, F15 (2), W16, Sp16, F16, W17 (2)

Instructor: Karsten Loepelmann [kloepelm@ualberta.ca](mailto:kloepelm@ualberta.ca)

Rational: Considered an elective course for the Certificate in Sustainability

Science (SCI):

## **SCI 299 A&B - Science Citizenship**

Supervised participation in a student-initiated community service learning and citizenship project. In this course, students will work in interdisciplinary groups to research and present the science underlying a global issue, as well as implement a local solution to that global issue. The course will also include a discussion of the possible career paths, ethics, culture and values of scientists. Normally taken after completion of a minimum of 30 units of course weight in a program in the Faculty of Science.

Offered: F14

Instructor: Dr. GR Lopnow [gloppnow@ualberta.ca](mailto:gloppnow@ualberta.ca)

Rational: considered an elective course for the Certificate in Sustainability

## **Saint Joseph's College - Sustainability Courses:**

### **CHRTC 221 - Interactions between Aboriginal Spiritual**

## **Traditions and Christianity**

This course will explore cross-cultural issues focusing on Aboriginal spiritual traditions and Christianity in Canada. Topics will include truth and reconciliation, healing, syncretism, worship, and ministry. Students will be challenged with a spectrum of voices, perspectives, and experiences.

Offered: F14, 15 (2), 16

Instructor: Sharon Pasula [spasula@ualberta.ca](mailto:spasula@ualberta.ca)

Rational: recommended by Denise Young, and included on the list of courses for the Certificate in Sustainability. Implications for social justice and cultural vitality of Indigenous peoples in Canada.

## **CHRTC 349 - Social Justice and Christianity**

An examination of particular social justice issues related to the economy, women, native peoples, the environment, etc., in light of Catholic social teachings and other Christian perspectives; social action strategies, and education for social justice.

Offered: F14, W16, F16

Instructor: Indre Cuplinskas [indre@ualberta.ca](mailto:indre@ualberta.ca)

Rational: recommended by Denise Young, and included on the list of courses for the Certificate in Sustainability. Implications for social justice.

## **CHRTC 396 - Environmental Issues: Christian Perspectives**

Theological and ethical issues concerning our relationship to the planet earth: responsible stewardship, non-renewable resources, pollution, the use of technology.

Offered: F15 (2)

Instructor: Nathan Kowalsky [nek@ualberta.ca](mailto:nek@ualberta.ca)

Rational: recommended by Denise Young, and included on the list of courses for the Certificate in Sustainability.

# Saint Joseph's College - Courses that include Sustainability:

## **CHRTC 203 - Topics in the Catholic Tradition: Teaching as a Vocation: International Aspects\***

This course will explore Catholic education as a primary vocation rather than simply a profession. There will also be an opportunity to explore in a direct way various "hot button" issues confronting the Catholic educator: e.g., euthanasia and assisted suicide, and issues around gender identity. The instructor will bring his experience working with refugees and broad international experience (Colombia, France, USA, the UN) to play on issues of social justice such as the role of Catholic Education in the alleviation of poverty, the problems of forced migration, education of the economically disadvantaged, etc. Finally, the course will explore the interaction between school and home, especially when poverty and dysfunctional domestic situations feed into each other.

Rational: by Denise Young, course includes module on "Education, the Rights of the Child, and Extreme Poverty and Domestic Dysfunction: UN and Latin American Catholic Responses"

\*Not included for the purposes of STARS credit AC1

## **CHRTC 272 - Catholic Moral Thought: An Introduction**

Major themes in Catholic moral reflection with application to contemporary issues. The meaning of morality and Christian conversion; the role of experience, the Bible, the Church, moral norms, the development of conscience, and personal responsibility.

Offered: F15

Instructor: Dr. Doris Kieser [dkieser@ualberta.ca](mailto:dkieser@ualberta.ca)

Rational: recommended by Denise Young, course includes Module on: "Ethics of the Economy and Globalization" and "Ethics and the Environment"

## **CHRTC 292 - Spirituality for Today's Christians**



Developing an understanding of the role of prayer, leisure and work within a Christian lifestyle in the light of Scripture, Christian tradition, current theological reflection, and personal differences.

Offered: F15

Instructor: Paul Flaman [pflaman@ualberta.ca](mailto:pflaman@ualberta.ca)

Rational: recommended by Denise Young, course includes module on “Ecology and Spirituality”

## **CHRTC 309 - Topics in the Christian Tradition: Theology, Politics, and Justice\***

This course will present an overview of the theological method as known as “Liberation Theology,” beginning with its origins in Latin America, and the concepts supporting it. The course will then examine other incarnations of this method—such as Palestinian, Aboriginal, Feminist, African-American—via class discussion and student presentations

Offered: W15

Instructor: Gerard McLarney [gom@ualberta.ca](mailto:gom@ualberta.ca)

Rational: by Denise Young, course includes module on “The lottery of birth” and “Poverty: Solidarity and Protest”

\*Not included for the purposes of STARS credit AC1

## **CHRTC 394 - Business Ethics: Christian Perspectives**

A theological study of ethical issues in business settings, dealing with such themes as employer/employee relationships, job security, advertising, distribution of wealth, acquisitive individualism, the common good, decisions on ethical issues in light of contemporary Catholic teaching.

Offered: Sp16, W16

Instructor: Dr. Matthew Kostecky [kostelec@ualberta.ca](mailto:kostelec@ualberta.ca)

Rational: recommended by Denise Young. Spring 2016 includes module on "Catholic Social Teaching and Economics Part I The Vocation of Business: Social Justice in the Marketplace". Winter 2016 includes

There are three fundamental or core areas that we will be focusing on "ethical and philosophical reflection upon those practices and theory" related to "business practices (construed widely, so as to discuss also various economic theories that support generally used practices)"

## **Saint Stephen's College - Sustainability Courses:**

### **CHRTP 319 - Eco-Theology**

Earth's divinity is infinitely precious and endangered. Participants will reflect theologically on this great challenge of the 21st century, and discover paths by which we can "stay awake" to the call of earth.

Instructor:

Offered: At least once in 2016-17 ([link](#))