

**Geography / Environmental Studies 1190:
Indigenous Knowledge, Science and the Environment**

Current environment and sustainability issues will be examined using a geographical approach that incorporates Indigenous knowledge, worldviews and practices. By comparing traditional ecological knowledge with western scientific approaches students will gain an enhanced understanding of ecosystems and society's place within it. The course engages students in case studies that exemplify the role of Indigenous Peoples in ecosystem management in Canada, in particular. The role of treaties and Indigenous rights in federal and provincial environment and resource management, the impact of environmental law decisions on Indigenous Peoples, and the adversarial and collaborative roles that Indigenous Peoples play in response to current environmental changes and challenges will be the focus of key topics.

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MyCourseLink (D2L): Lecture Notes, Discussions Postings, Reading Materials and Assignment Submissions

Lectures: Mondays and Wednesdays 8:30-10:00 am ATAC 1001 (Mon. Jan. 8 to Wed. April 3)

Course Evaluation:

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| In-Class Participation | 15% |
| Guest Speaker Messages | 15% |
| Quizzes (x2) | 20% |
| Group Presentation | 20% |
| Individual Project Report | 30% |

Weekly Schedule and Content

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| Jan. 8 & 10 | Knowledge Acquisition and Perceptions of Land |
| Jan. 15 & 17 | <u>In-Class:</u> Perceptions of Wilderness COP 15 30/30 |
| Jan. 22 & 24 | <u>In-Class:</u> Development Planning; KO Tribal Council, Rights and Governance |
| Jan. 29 & 31 | Issues and Opportunities in Treaty 5 and 9 |
| Feb. 5 & 7 | <u>In-Class:</u> Collision of Cultures – Scenario Analysis - Colonialism |
| Feb. 12 & 14 | <u>Quiz 1:</u> Knowledge is Everywhere; Tools of Colonization |
| Feb. 19 & 21 | READING WEEK NO CLASS |
| Feb. 26 & 28 | Knowledge and Connection to the Land – Tripartite Reconciliation |
| Mar. 4 & 6 | Community Health/Child and Family Services |
| Mar. 11 & 13 | Indigenous Relationships with Water |
| Mar. 18 & 20 | <u>Quiz 2:</u> Indigenous Knowledge and Western Science |
| Mar. 25 & 27 | <u>Presentation and Reports Due:</u> Presentation Groups I & II |
| Apr. 3 | Presentation Group III (No Class Easter Monday April 1) |
| Apr. 8 | Presentations Group IV |

COURSE OBJECTIVES & LEARNING OUTCOMES

| Objectives | Outcomes – You should be able to: |
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| Understand the mechanisms of knowledge creation | <ul style="list-style-type: none"> Articulate the differences and interactions of data, information, knowledge and wisdom |
| To appreciate and acknowledge Indigenous and western science. | <ul style="list-style-type: none"> Articulate the differences in data collection, perceiving information, producing and accepting knowledge in both a holistic and reductionist lens. |
| To appreciate the richness of the knowledge that comes from the land where we live. | <ul style="list-style-type: none"> Describe the role values and ethics play on our environmental worldview. Describe how diversity of knowledge builds resilience in a system. |
| To realize the importance of a diversity of science methods and knowledge | Articulate the interdependencies of worldviews, institutions and technologies in defining our cultures and relationship to the environment. |
| To understand and acknowledge how Indigenous people have been threatened by the domination of western science and knowledge. Invisibility & colonialism. | <ul style="list-style-type: none"> Describe the major instruments and effects of colonialism. |
| To understand the general concepts of a systems approach to the social-ecological environment. | <ul style="list-style-type: none"> Describe the environment in terms of its structure and function. Articulate a view of humans as participants in the environment and humans as controllers of the environment. |
| To challenge our concepts of sustainability and sustainable development and the human role in ensuring survival for future generations. | <ul style="list-style-type: none"> Discuss short and long term strategies to meet the security needs of people in the social-ecological system. |
| To provide exposure to environmental issues and their effects on local people through case study examples | <ul style="list-style-type: none"> Discuss some of the major challenges of development and the environment through a local lens. |

Indigenous Course Requirement Themes

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| Identify Indigenous worldviews, knowledge and practices | The class will be initiated with an appreciation of diverse worldviews in relation to issues of environmental and cultural sustainability. This has been an initial approach before defining problems and researching solutions. More specifically appreciating worldviews as related to various forms of knowledge and practices. Additionally, Indigenous worldviews, knowledge and practice have been key themes in understanding the commonalities (knowledge and practices) unique to global Indigenous peoples, their relationships to the land and their ability to adapt to environmental change. |
| Relationships between land, culture, language and identity | This theme gives recognition to the tradition of Indigenous knowledge reflecting (historically) our modern concepts of sustainability, carrying capacity, resilience, adaptive management and ecosystem approaches. The precautionary approach, for example, may have been adapted into a management strategy, but perhaps can only be reflected/experienced through a deep and meaningful connection to all that is (intrinsic value). |
| Identify culturally appropriate ways of engaging Indigenous communities | Environment and resource management case studies demonstrate both the challenges and advantages of incorporating indigenous worldviews and practices into Western governance and decision-making. Modern 'toolkits', TEK mapping and community action research are just a few examples that incorporate traditional/indigenous knowledge into the evolution of engagement today. This focus traces a period of marginalization to a future of co-management (theory). Adaptive Co-management is embraced to provides advanced / more meaningful concepts of engagement and shared decision-making. This discussion of co-management theory and case examples will guide students to think beyond the linear cause and effect relationships of environmental issues by exploring socio-ecological resilience. Community- |

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| | based research and participatory action research are just two current examples that demonstrate how Indigenous people are engaging in research in culturally appropriate ways. |
| Demonstrate knowledge of Canadian Indigenous peoples' history | Examining the progression of environmental decision-making in regions of Canada that have signed treaties, vs regions that have modern Land claim agreements, provides an opportunity for students to trace aboriginal history back to first contact and colonialism. Mapping of traditional lands, sacred sites and archaeological assessments that have triggered by industrial development will further allow students to learn and reflect on the migration and adaptation of aboriginal cultures prior to contact as compared to post confederation (from the standpoint of Canadian Industrialism after confederation). |
| Analyze the impact of legal decisions on Aboriginal and treaty rights, including the duty to consult | The Delgamuuk vs British Columbia; Haida Nation vs. British Columbia; James Bay Agreement; (Berger Report) McKenzie Valley Pipeline; O'Connor Report (Kashechewan Drinking Water) are just a few Canadian examples that provide key environmental law case studies that can be compared with international cases to reflect the impact of environmental decision-making and the duty to consult for Aboriginal People in Canada, as well as Indigenous People worldwide. |
| Identify approaches to reconciliation between First Nations, Inuit, and Métis and others in Canadian society | The effects of residential schools and loss of elder knowledge are key influences to self-determination, social capital and the effective inclusion/involvement of Indigenous people and knowledge in environment and sustainability issues. A lack of recognition of Metis rights and perspectives in modern decision making still exists, and the geographic aspects to inclusion will further detail the complex socio-ecological relationships that have been affected since Confederation. Approaches to reconciliation, therefore, will be discussed in relation to these challenges, not only by highlighting the current opportunities for reconciliation in Canada, but through successful co-management case studies that exist internationally. The key approach to reconciliation in the course is the recovery and maintenance of indigenous worldviews, philosophies and ways of knowing. |
| Demonstrate knowledge of the impacts of colonialism on Indigenous peoples and strategies to resist assimilation | In addition to the aforementioned focus on environmental and social impact assessment from major industrial development in Canada and abroad, a focus on conflict resolution during environmental protests will provide case studies to demonstrate resistance to assimilation. Case studies of opposition (such as road blocks in Grassy Narrows and Caledonia) and hunger strikes (Kashechewan) are just a few examples of the desperate measures that First Nations communities in Canada resort to to resist colonial systems of development and 'consultation'. These cases provide a link to much deeper and systemic issues on First Nations communities that can be explored through modern occurrences of reserve 'States of Emergencies', community evacuations and the development of campaigns such as 'Idle No More' that highlight the extreme lack of involvement and conditions on First Nations Reserves. By applying Indigenous knowledge to contemporary environmental issues, these teachings can provide liberation strategies that Indigenous People can use to untangle themselves from a dominant colonial history. |
| Articulate the relationship between land, culture, language and identity in Indigenous communities | This ICR course gives recognition to the tradition of Indigenous knowledge reflecting (historically) our modern concepts of sustainability, carrying capacity, resilience, adaptive management and ecosystem approaches. The precautionary approach, for example, may have been adapted into a management strategy, but perhaps can only be reflected/experienced through a deep and meaningful connection to all that is (intrinsic value). The connections between land, culture and language can therefore be observed by exploring the commonalities of songs, rituals, teachings and community relations of Indigenous peoples worldwide. Although the deeper connections may only be realized through personal discovery and spirituality, the literature on the social and environmental determinants of health can help academics to draw some of the many links between community, the land, language and the identity of being Indigenous. |

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| <p>Discuss the relationship between the Crown and Indigenous peoples, as defined by treaties and agreements</p> | <p>Case studies from mega-project development and environmental assessments (ie Hydro-electric dams; drinking water protection; contaminants and pollution) will demonstrate the negative ramifications of inappropriate (lack of) engagement. Modern case studies pertaining to source water protection, habitat conservation and fisheries management further provide insight about the impacts of environmental decision-making on traditional ways of life.</p> |
| <p>Contribute to strategies for improving Indigenous communities' well-being.</p> | <p>Indigenous knowledge provides an ancient form of being in balance with the nature of nature, despite a world of continual change and uncertainty. As humanity faces a renewed sense of global change and challenges in the 21st Century, the exploration of traditional teachings in modern lives can liberate both Indigenous and non-Indigenous peoples from unhealthy relationships with the land and with each other.</p> |