University Studies Cluster Proposal Cover Sheet
For Academic Year 2009-2010

Cluster Proposed for: ___ Environmental Sustainability

Title of course: _Sustainability, Systems Concepts and Indigenous Perspectives _

Course Number: ___ SYSC399U

Proposing Faculty: _Wayne Wakeland & David Hall 

Cluster Coordinator: ___ Joe Maser

Proposal Type:
___ Cluster Course to New Cluster
__X__ New Course to Cluster
___ Removal

Other clusters this course is assigned to:

none

Proposals are due to the University Studies office (CH 117) with 12 duplicate copies by Friday, November 9, 2007 so that they may be reviewed and forwarded to the UCC Committee for final approval.
University Studies New Cluster Course Addition

Adding a previously unapproved course to a cluster

(When addressing questions, please attach a separate sheet)

PROPOSING FACULTY (Name, signature, and department)

Wayne Wakeland, Systems Science
David E. Hall, Psychology Adjunct

PROPOSED CLUSTER(S)

Environmental Sustainability

1. THE COURSE

A. COURSE TITLE, NUMBER, AND CATALOG DESCRIPTION

Course Title: Sustainability, Systems Concepts and Indigenous Perspectives

Course Number: SYSC399U

Catalog Description: Course explores the concept of sustainability from a systems perspective and from the perspectives of contemporary indigenous leaders, and strives to draw parallels between these two perspectives. A dialogue oriented format and regular small group exercises promote a cooperative and student-driven learning environment. Course work calls upon students to apply their developing understanding of sustainability to their own lives.

B. DEVELOPMENT

New course under development

C. AVAILABILITY

Initially the course is expected to be offered annually, but could be offered more or less frequently depending on student interest and instructor availability.

D. PREREQUISITES

No additional prerequisites.

2. COURSE OUTLINE.
Instructor(s): Dr. David E. Hall & Dr. Wayne Wakeland

Could be taught by either instructor, or could be co-taught.

Key concepts and modules (one to two weeks per module):

In pursuit of a deeper understanding of sustainability, content will be drawn from two primary sources: 1) Systems science and selected writings of systems thinkers; and, 2) interviews with contemporary indigenous leaders on the subject of sustainability from the recent dissertation research of Hall (2008)—with much of the interview content available for presentation in video format. Drawing upon these resources, the following sets of interrelated concepts will be explored in a non-linear fashion over the course of the term:

- Dialogue, Multiple perspectives, Establishing context, basic language, community agreements and objectives
- Systems Science view of Sustainability; Wholes and Parts, Interconnectedness, System/environment interaction, Open systems
- Tragedy of the commons, Stewardship, Relationship with the land
- Culture, Mental models, Values
- Causal loop diagrams, Feedback, Reciprocal dynamics, Limits to growth, Balance
- Community, Cooperation, Adaptation, Bridging science and traditional ecological knowledge

Assignments and Grading:

- Attendance & Participation (30%)
- Term paper (40%) [Initial draft 15%, final version 25%]
- Group project & presentation (20%)
- Self evaluation (10%)

Attendance and Participation (30%): As utilization of class time and student participation are central to the success of the course, attendance and active participation will entail a significant portion of each student’s grade. Students will be entitled to one missed class without loss of points. Timely communication and documentation of emergencies can excuse students for additional absences.

Term paper (40%): Each student will be required to compose a paper that addresses each of the following:

A. Self identity
   - Describe your ancestral heritage, personal history, cultural background/experiences, and the focus of your most recent work/studies/activities.

B. Community affiliation
   - How would you define your community? What places and people
make up your community?

C. The meaning of “Sustainability”
   ○ Define “sustainability” in your own words. What comes to mind when you think of sustainability? Any images, symbols, examples that you can share to help someone better understand your thinking?

D. Your Vision of Sustainability
   ○ Paint a vivid picture of what sustainability would look like for your community. What are some core values that would be held by members of your community? What are some basic KSA’s (knowledge, skills, abilities) that would be widely held by members of your community? Etc.

E. How to Get There
   ○ What behaviors and strategies can you employ from this day forward to make your vision of sustainability a reality? What are the greatest obstacles to be confronted?

F. Summary of the systems ideas and indigenous perspectives that were most influential and informative for you.

G. References (sources must be cited throughout)

An initial draft of the term paper must be completed by week 7 in order to be prepared for the group work that follows, and also to receive feedback. The draft should address items A through D in detail, plus your initial ideas regarding items E and F. The draft paper contributes 15% of the course grade. The final paper is due during Finals Week, and should include A through D (revised as appropriate), plus complete answers for E through G.

**Group Project & Presentation (20%):** During the week draft term papers have been completed, students will be organized into small groups of 4 or 5 in order to review each other’s work and give feedback. Forms will be provided to facilitate feedback. These small groups will have the final three weeks of the term together to identify similarities and differences across their respective individual papers. Groups will be required to document these similarities and differences and deliver a presentation to the entire class during finals week.

**Self evaluation (10%):** Self reflection is important in this type of course, in part because we are often the best judge of our own performance in an exploratory endeavor. At the end of the term we will ask students to complete a self-evaluation form, asking students to rate themselves on questions like: “I put in as much effort to this class as I could have” (using a Likert scale from Strongly Agree to Strongly Disagree). The self evaluation will contribute 10% of the course points.
Preliminary Reading List:

Excerpts from:


Misc articles:


Special issue of Science (#302) (2003) entitled: Tragedy of Commons?


3. GENERAL EDUCATION GOALS.

A. COURSE CONTENT & SUITABILITY FOR CLUSTER

*From website: Environmental Sustainability Cluster*

“This cluster creates a bridge between the scientific approach to analyzing and solving environmental problems, the socioeconomic concerns involved in formulating and administering environmental policy, and the historic and philosophical basis of humanity’s relationship to ecosystems. With the common goal of defining, characterizing and understanding environmental sustainability, the cluster identifies how each participating discipline can creatively contribute and thus, enable students to direct their own courses of study toward this end.”

There is strong alignment between the proposed course content and the thematic focus of the Environmental Sustainability Cluster. First, the subject of sustainability is inherently interdisciplinary, and both the systems perspective and indigenous perspectives are inherently interdisciplinary, making them powerful and important tools for exploring an understanding of sustainability.

- The interview material featuring contemporary indigenous leaders offers tremendous wealth of content on the subject of humanity’s relationship with the planet, from historical, philosophical, and culturally diverse perspectives. The examples and illustrations offered by these leaders also illustrate genuine socioeconomic concerns and their interconnection with ecology.

- A rich set of systems concepts will be presented through lecturelettes, readings, and recorded interviews of indigenous leaders. These concepts have been central to the establishment of sustainability as a mainstream subject, and are central to science’s contemporary understanding of natural environments. However, often the ideas themselves are obscured in discipline or domain specific jargon, creating barriers for inter-disciplinary communication. This class will empower students through exposure to basic systems concepts, and give them opportunity to apply that understanding through
in-class exercises, and a personally relevant term paper.

- The regular in-class exercise of presenting students with thought-problems will place students in the position of policy-makers where they must justify decisions drawing upon scientific understanding and valuation of human implications.
- The cornerstone assignment of the course puts students in the position of articulating their own understanding of sustainability applied to their own life and the community with which they identify.

B. UNST GOALS. Indicate what materials and assignments will address those University Studies goals appropriate to the course content and cluster theme (the goals are Inquiry and Critical Thinking, Communication, Diversity of Human Experience, and Ethical Issues & Social Responsibility).

The proposed course will serve each of the University Studies Goals

- **Inquiry and Critical Thinking** – Students will be empowered to explore much of the content on their own terms and make explicit meaningful connections between basic concepts from systems science and the perspectives of indigenous leaders. Small group activities will position students in hypothetical situations that call upon them to think critically and apply course content in a manner analogous to real-world decision-makers.

- **Communication** – Emphasis will be placed on the importance of effective and respectful interpersonal communication. Group dialogue will be employed as a primary tool to facilitate the course learning experience and small group activities will require students to verbally articulate both their understanding and their uncertainty regarding course topics. In addition to the practice and development of oral communication skills, the course will also require a major written assignment and a team project that will entail written and oral communication with opportunity for visual representation.

- **Diversity of Human Experience** – Utilization of interviews of indigenous leaders from diverse cultural backgrounds will ensure that students are exposed to perspectives that differ from their own, and are rarely represented elsewhere in mainstream society. Additionally, regular engagement in group dialogue will result in each student being exposed to the perspectives of all other students in the course. The group projects will require students to take an intimate look at work of their peers for identification of similarities and differences, which will foster awareness of both diversity and commonalities of human experience.

- **Ethical Issues & Social Responsibility** – Reflection on ethical issues and social responsibility is central to the concept of this course. The interview content with indigenous leaders that will be drawn upon is rich with arguments and examples regarding the importance of embracing social responsibility and behaving with a high degree of ethical integrity to achieve sustainability. Class activities will include case studies that will put students in the position of policy decision makers with an emphasis on being able to invoke persuasive ethical arguments to support their decisions.

B. CLASSROOM ENVIRONMENT. Discuss the teaching strategies employed in the course and how they articulate with the student-centered, active-learning strategies characteristic of University Studies courses.
Learning through dialogue will call upon students to be active contributors to the production of meaning and understanding. The dialogue approach will also develop skills of listening and of articulating personal understanding in a manner that is respectful of others.

Small group activities will present students with hypothetical scenarios that require thoughtful reflection and defensible decision-making on challenging issues (see example below).

Traditional lecture format will be used sparingly, as appropriate for the various topics.

Multi-media materials, particularly video, will be employed to bring indigenous perspectives on sustainability into the classroom for more intimate and engaging exposure.

Personal relevance is emphasized in the term paper, giving students the opportunity to express their understanding of the course material through application to their own life.

Illustration of a standard day:

a) Class begins with a short presentation that features one or a combination of the following:
   - A video clip of an indigenous leader discussing a topic/theme related to sustainability
   - A case study that features a current practice that either violates or embodies principles of sustainability
   - Lecturette on a systems concept

b) Floor opened for dialogue driven by student contributions following a consistent structure:
   - Summarization of key ideas observed
   - Questions provoked
   - Connection of material with readings
   - Old ideas recalled/new ideas provoked
   - Application of understanding

c) Thought problem posed, and students break into small groups for exploration. For example:
   **Imagine you are leaders of a small self-sufficient community. A recently formed relationship with a nearby community has exposed you to a new technological innovation. This technology makes an aspect of food preparation easier, but it makes you dependent on the neighboring community for a particular resource. Do you embrace the new technology or retain the traditional methods of food preparation?**

   **Dialogue as a group and document:**
   - The major questions raised
   - Any unintended consequences
   - Arguments for adoption
   - Arguments against adoption
   - Systems concepts and/or indigenous perspectives draw upon

d) Each group presents a short summary of their conversation and decision to the class.

e) Instructor closes with some take home messages and orientation to the readings for next class.
OBTAINT CHAIR AND CLUSTER COORDINATOR SIGNATURES BEFORE SUBMITTING TO UNIVERSITY STUDIES OFFICE

DEPARTMENT CHAIR(S) [Signature]

DATE: 12/2/08

CLUSTER COORDINATOR [Signature]

DATE: 12/2/08

All changes to Clusters must be approved by PSU's Senate Curriculum Committee.

THE ORIGINAL + 3 COPIES OF THE PROPOSAL MUST BE RECEIVED AT UNIVERSITY STUDIES (CH 117) BY NOVEMBER 7 2008.

Proposals submitted by this due date will be reviewed for inclusions in clusters beginning in AY 2009 - 2010.
COURSE APPROVED FOR CLUSTER INCLUSION

CHAIR, CLUSTER COORDINATORS:

[Signature]

DATE: 12/2/08

CHAIR, UNST COMMITTEE:

[Signature]

DATE: 12/3/08