UNIVERSITY OF SASKATCHEWAN
School of Environment and Sustainability

ENVS 401.3
Sustainability in Action
Spring 2014

Course Instructors: Dr. Philip Loring, Room 332 Kirk Hall
phil.loring@usask.ca, 306-966-1617
Office hours: by appointment

Dr. Colin Laroque, Room 5C10, Agriculture Building
colin.laroque@usask.ca, 306-966-2493
Office hours: by appointment

Course Schedule: T & Th, 11:30AM-1:00PM, 1E85 Agriculture Bldg.
Course notes: See course website http://bblearn.usask.ca
Assessment:
[Assignments %20]
[Participation %10] (page 6)
[Midterm exam %30]
[Project %40] (page 6)

Prerequisites: ENVS 201.3 and the permission of instructors. This course is intended for senior undergraduate students. This course is required for students enrolled in the BASc in Environment and Sustainability. Students enrolled in Renewable Resource Management or Ag-Bio Environmental Science Major but not enrolled in the sustainability certificate are not required to take ENVS 201.3.

Calendar Description

This course combines seminars and project-based activities to examine local and global sustainability issues, integrating perspectives and knowledge from both the social and natural sciences. Students will work in interdisciplinary, collaborative groups to address sustainability challenges.

Course Overview

As a capstone to your studies at U of S, the goal of this class is to provide you with an interdisciplinary and applied perspective on sustainability and environmental problems. At the core of this course is a project that you will identify, pursue, and complete prior to the end of the semester, a project that addresses some on-campus sustainability problem. However, our weekly meetings will also attend to the core ecological and social science concepts, frameworks, and theories that comprise "sustainability science" as we know it today. The goal is for you to learn how to ground your thinking about environmental problems in the best available science for decision-making and planning. A continuing question among sustainability scientists and applied scientists more generally is the extent to which science can provide inputs into or even best practices for what are largely societal dilemmas, and we will repeatedly address this question here.

Each class period, unless otherwise advised, you will be expected to hand in short, journal-entry style response papers for all of the readings. Assigned readings should be read PRIOR TO the date on which they are listed. In addition to these response papers, you will be marked for your participation in in-class discussions and activities.

A take-home mid-term will be distributed on the last meeting of Week 6, and will be due on the first meeting of Week 7.

You will also work in small "think tank" groups of 5 or 6 on a campus sustainability problem. The culmination of this work will be a short, 20 minute presentation to the class.

Learning Outcomes

Upon completing this class, students will be able to:

1. Integrate and apply knowledge from previous courses and current literature to develop informed opinions regarding current sustainability topics that reflect an informed understanding of multiple, and sometimes conflicting, sources of information;
2. Critically discuss, evaluate and synthesize knowledge about sustainability from natural and social sciences;
3. Demonstrate skills in team-based research and problem-solving;
4. Discuss and formulate practical solutions to current sustainability issues in Saskatoon;
5. Facilitate and engage in discussion within a group setting; and
6. Demonstrate effective oral and written communication.

Important dates

Midterm:

Final Project Presentations Scheduled:

Final Projects Begin:

Your Final Project Presentation: _____ (TBD)

Readings

Required Texts

Marten, Gerry, Human Ecology. Available free online http://gerrymarten.com/human-ecology/tableofcontents.html#Contents

Edwards, Andres R. The Sustainability Revolution: Portrait of a Paradigm Shift. CAT Publications, 2013. Available in Print or E-book form ($9.99 from Google books)

Walker, Brian, and David Salt. Resilience Practice: Building Capacity to Absorb Disturbance and Maintain Function. Island Press, 2012. Available in Print or E-book form ($15.99 from Google books)

Additional readings, as necessary, will be made available on the course website.

Course schedule (tentative)

Note: Readings should be read PRIOR to the date for which they are listed!

Keep an eye on Blackboard to confirm the readings, as they may change.

Week 1 and 2 "Introduction - Finding common ground" Assigned readings and seminar based discussions explore perceptions of sustainability and environmental responsibility. We re-explore the three dimensions—environmental, social and economic. We investigate the mix of disciplines in the class and the advantages they bring separately to understanding sustainability. We integrate understanding so that instructors and students have a common mental model for sustainability concepts and applications as we move forward into team projects.

Week 1	**Introductions**
Tuesday	Short film: "Das Rad"
	Activity: Entrance Survey
	Open Discussion
Thursday	**Readings:**
	Quinn, "The New Renaissance"
	Marten, "Introduction" (pp 1-11)
	Assignment: Dense question from readings

Week 2	**Envisioning Sustainable Futures**
Tuesday	**Readings:**
	Edwards CH1: The Birth of Sustainability
	Kates et al. 2001 "Sustainability Science" (incl. response by Deep Narayan Pandey)
	Assignment: Dense question from readings
	Lecture: "The Bad News"
Thursday	**Assignment/Exercise:** Four Futures
	Readings:
	Snyder, "Four Changes"
	Jensen, "Forget Shorter Showers
	Lecture: "The Great Forgetting"

Week 3 "Identification of sustainability projects and teams" Classroom discussions will facilitate identification of local sustainability issues, and allow students to collectively build sustainability teams for the project work. Students will identify key themes, identify potential student contributions from disciplinary perspectives, and facilitate integration into interdisciplinary, problem oriented visions for the project. Project management tools and timelines will be discussed and established to ensure completion of the project.

Week 3	**Sustainability & Institutions**
Tuesday	**Sustainability and higher education**

	Readings:
	Articles from International Journal of Sustainability in Higher Education Vol. 3 Issue 3
	Activity: Lightning talks on assigned article
Thursday	**Readings:**
	Edwards Chapter 2
	Review the websites for ASHE and STARS:
	http://www.aashe.org/, https://stars.aashe.org/
	http://www.iop.harvard.edu/does-divestment-work
	Lecture by Margret Asmuss, U of S Sustainability Office

Week 4 - 6 – "**Social & ecological background on sustainability"** Here we explore different social, ecological, and environmental science underpinnings for sustainability, including positive and negative feedbacks, growth curves and stability domains, population growth, resilience, human nature, and human and social well-being. The difference between thinking of sustainability as a technological or behavioral problem will also be addressed.

Week 4	**Sustainability Indicators**
Tuesday	**Readings:**
	Edwards CH3
	To GDP or not to GDP
	Costanza 2014
	Assignments: Dense questions, Register with STARS website
	Lecture: Social, ecological, and economic underpinnings of sustainability
Thursday	**Exercise: Indicator or Measure?**
Week 5	**Sustainability labels and certifications**
Tuesday	**Readings:**
	Edwards CH4
	Brosius, "Green Dots Pink Hearts"
	Konefal "Environmental Movements"
	Assignments: Dense questions, Register with STARS website
Thursday	**Assignment:** Report on a certification program/label
	Activity: Which question(?) does your label address?
Week 6	**Systems Thinking**
Tuesday	**Readings:**
	Habits of a Systems Thinker
	"System Behavior and Causal Loop Diagrams"
	Assignment: Identify project/group interests
	Activity: Simple Systems Diagram & Causal Loops
Thursday	**Activity: Problems in collective action**

	Midterm Exam Handed Out!

Week 7 Midterm

Week 7	**Midterm**
Tuesday	**Midterm Exam DUE & discussion**
Thursday	**Environmental Justice**
	Readings:
	Agyeman & Evans
	McKibben "Global Warming's Terrifying New Math"
	Rahnema "Another take on the population problem"

Week 8 to 10 – "**Current approaches to sustainability"** Classroom seminars and discussions will focus on current approaches to sustainability at the local, national and global scale. Time will also be used to check in with the sustainability projects, and ensure that data collection and project development are progressing according to project milestones.

Week 8	**Resilience, Vulnerability, Adaptation**
Tuesday	**Readings:**
	Walker & Salt CH1
	Holling 1973
	Nelson et al 2007 "Adaptation to Environmental Change"
	Broch 2013 "Social Resilience"
Thursday	**Planning your project timeline**
Week 9	**Design principles**
Tuesday	**Readings:**
	Edwards CH 5
	Savory: How to green the world's deserts and reverse climate change (youtube)
	Assignment: Project abstracts
Thursday	**Project Abstract Peer-review**
Week 10	**Good Presentations**
Tuesday	**Readings:**
	Business Insider: 10 things to do in the 15 minutes before a presentation
	Lifehack: 10 tips for more effective powerpoint
	Henrich et al. 2010 "The weirdest people in the world?"
Thursday	**In-class project time**

Week 11 to 13 – Group presentations. Groups will work on their projects, to be presented at the Sustainability on Campus Symposium (Date TBD)

In-class Participation Grading Rubric

10% of your class grade is dependent on participation. We understand that not all students prefer to participate in the same way, so this grade includes both in-class and online participation. Here is how you can succeed:

0 pts	**2.5 pts**	**5 pts**	**7.5 pts**	**10 pts**
No engagement with the class whatsoever	Sporadic, compulsory participation	Participates meaningfully, but rarely	Frequently participates, in a meaningful way	Participates fully, regularly, and meaningfully

Final Project Rubric

Your final project constitutes 40% of your grade. You have a lot of control over how this project will be graded. The following categories will always be involved in how your final is graded:

- Presentation (from 30-50%)
    - This can be one of any number of formats, including but not limited to: powerpoint presentations, videos, interpretive dance, puppet shows, etc.
- Product (from 30-50%)
    - This can be one of any number of formats, including but not limited to: written report, draft Wikipedia article, project brochure, etc.
- Group work (excepting students who elect to do projects on their own) (from 10-20%)
    - Group work includes any and all contributions to the project, whether in the form of research, writing, presenting, etc. Group members will all be asked to provide grades for everyone in their group, including themselves, and each persons' score will be the average of these.

As a group you will elect the final proportion by which the above three categories will contribute to your final grade.

School and University policy statements

1. Grading System Description

U of S maintains a standard grading system, for which details can be found here: http://students.usask.ca/current/academics/grades/grading-system.php

2. Midterm and Final Examination Scheduling

Midterm and final examinations must be written on the date scheduled. Final examinations may be scheduled at any time during the examination period; students should therefore avoid making prior travel, employment, or other commitments for this period. If a student is unable to write an exam through no fault of his or her own for medical or other valid reasons, documentation must be provided and an opportunity to write the missed exam may be given. Students are encouraged to review all examination policies and procedures: http://www.usask.ca/calendar/exams&grades/examregs/

3. Assessment Issues and Grade Disputes

A student shall be permitted to see any examination unless otherwise stated at the beginning of the course. Students dissatisfied with the assessment of their work in any aspect of course work, including midterm or final examination should consult the University policy '*Student Appeals or Evaluation, Grading and Academic Standing'* found at the Office of the University Secretary (http://www.usask.ca/university_secretary/policies/student/policy-on-student-appeals-of-evaluation,-grading-and-academic-standing.php).

4. Disability Services for Students (DSS)

Students who have disabilities (learning, medical, physical, or mental health) are strongly encouraged to register with Disability Services for Students (DSS) if they have not already done so. Students who suspect they may have disabilities should contact DSS for advice and referrals. In order to access DSS programs and supports, students must follow DSS policy and procedures. For more information, check http://www.students.usask.ca/disability/ , or contact DSS at 966-7273 or dss@usask.ca. Students registered with DSS may request alternative arrangements for mid-term and final examinations. Students must arrange such accommodations through DSS by the stated deadlines. Instructors shall provide the examinations for students who are being accommodated by the deadlines established by DSS.

4. University Learning Centre (ULC)

The ULC offers academic support to UofS students, including: workshops, writing help, math help, community service-learning, learning communities, study skills support, technology help and Peer Mentor Programs. More information can be found at http://www.usask.ca/ulc/

5. Academic Honesty

The University of Saskatchewan is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Student Conduct & Appeals section of the University Secretary Website and avoid any behavior that could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

All students should read and be familiar with the Regulations on Academic Student Misconduct (http://www.usask.ca/university_secretary/honesty/StudentAcademicMisconduct.pdf) as well as the

Standard of Student Conduct in Non-Academic Matters and Procedures for Resolution of Complaints and Appeals (http://www.usask.ca/university_secretary/honesty/StudentNon-AcademicMisconduct2012.pdf)

For more information on what academic integrity means for students see the Student Conduct & Appeals section of the University Secretary Website at: http://www.usask.ca/university_secretary/pdf/dishonesty_info_sheet.pdf

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Academic Integrity Checklist

Honesty and integrity are expected of every student at the University of Saskatchewan. There are many forms of academic misconduct; perhaps the most common is plagiarism. According to the University of Saskatchewan Guidelines for Academic Conduct:

"Plagiarism is the theft of the intellectual creation of another person without proper attribution. It is the use of someone else's words or ideas or data without proper documentation or acknowledgment. Quotations must be clearly marked, and sources of information, ideas, or opinions of others must be clearly indicated in all written work. This applies to paraphrased ideas as well as to direct quotations. A student must acknowledge and fairly recognize any contributions made to their personal research and scholarly work by others, including other students."

There are many resources on campus to assist you with proper citation and paraphrasing.

- For guidance on when and how to quote from other documents and how to properly paraphrase information in other documents, see http://library.usask.ca/howto/honesty.php.
- To learn about different styles of citation and how to properly cite a variety of different sources including statistics, archival materials, maps, legal documents and government reports, see http://libguides.usask.ca/citation.

When in doubt about a citation requirement or your approach to paraphrasing, ask your librarian or your course instructor or your academic supervisor for assistance.

Before you submit any written work, review it against the following checklist:[1]

- ❒ I have acknowledged the use of all ideas with accurate citations.
- ❒ I have used the words of another author, instructor, information source, etc., and I have properly acknowledged this and used proper citation.
- ❒ In paraphrasing the work of others, I have put the idea into my own words and did not just change some words or rearrange the sentence structure.
- ❒ I have checked my work against my notes to be sure that I have correctly referenced all quotes or ideas.
- ❒ When using direct quotations I have used quotation marks (or other means to clearly identify the quoted text) and provided full citations.
- ❒ Apart from material that is a direct quotation, everything else in the work is presented in my own words.
- ❒ When paraphrasing the work of others I have acknowledged the source or the central idea.
- ❒ I have checked all citations for accuracy (e.g. page numbers, journal volume, dates, web page addresses).
- ❒ I have used a recognized reference style (i.e. APA, MLA, Chicago etc.) consistently throughout my work.
- ❒ My list of references/ bibliography includes all of the sources used to complete the work.
- ❒ I have accurately and completely described any data or evidence I have collected or used.
- ❒ I fully understand all of the content (e.g., terms, concepts, theories, data, equations, ideas) of the work that I am submitting.
- ❒ The content of the work has not been shared with another student, unless permitted by the instructor.
- ❒ The content of the work reflects wholly my own intellectual contribution or analysis and not that of another student(s), unless the instructor approved the submission of group or collaborative work.
- ❒ If another person proofread my work it was for the sole purpose of indicating areas of concern, which I then corrected myself.
- ❒ This work has not been submitted, whole or in part, for credit in another course or at another institution, without the permission of the current course instructor(s).
- ❒ I understand the University of Saskatchewan's policy and expectations concerning academic honesty and the consequences of plagiarism or other forms of academic misconduct.

[1] Compiled based on York University (http://www.yorku.ca/tutorial/academic_integrity/acadintechecklist.html), Curtin University (http://academicintegrity.curtin.edu.au/global/checklist.cfm, University of Toronto (http://www.utoronto.ca/academicintegrity/resourcesforstudents.html), and Skidmore College (http://cms.skidmore.edu/advising/integrity/checklist.cfm) checklists for academic integrity.