LANE COMMUNITY COLLEGE **SCIENCE DEPARTMENT**
Spring Term 2008

INTRODUCTION TO SUSTAINABILITY

COURSE NUMBER: NRG 161
INSTRUCTORS: Tammie Stark, M.A.
CRN: 42452

CLASS HOURS: MW 4:00pm - 5:50 pm

OFFICE HOURS: W 3:00 – 4:00 pm

COURSE CREDIT: 3

OFFICE LOCATION: Eugene, Bldg 16 / 264

CLASS LOCATION: Bldg 16 / Room 142

E-MAIL ADDRESS: starkt@lanecc.edu

TELEPHONE/VOICE MAIL: 541.463.5451

REQUIRED TEXTS & MATERIALS: *Leading change toward sustainability*, Doppelt from LCC bookstore or online.
OPTIONAL: Optional packet available from Ginny Young, youngg@lanecc.edu, 463.4729, SCI Room 252

CLASS OBJECTIVES: In this class you will learn what sustainability is, how to measure sustainability & how to implement sustainability actions. You will create a personal definition of sustainability and learn about the importance of pluralism, systems thinking, resource conservation & collaboration to foster sustainability. Through these activities you will begin to see how residences, communities, businesses and cities might be (re)designed to create sustainable and healthy patterns of living. Three (3) credit class.

ATTENDANCE POLICY: Attendance is required and part of your grade

GRADING POLICY: Grade based on: attendance/participation/reading; journal; one written assignment; group presentation

TEACHING METHODS: Methods will include lecture, class discussion and experiential components

FIELD TRIPS: ONE REQUIRED field trip may be scheduled

WRITING ASSIGNMENTS: One (1) written exercise is required
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EATING/DRINKING POLICY: According to LCC rules

ACADEMIC INTEGRITY: Please uphold the highest regard for yourself, your work and others & their work

Students With Disabilities: If you need support or assistance because of a disability, you may be eligible for academic accommodations through Disability Services. For more information, contact Disability Services at (541) 463-5150 (voice), or 463-3079 (TTY), or stop by Building 1, Room 218.

In case of MEDICAL EMERGENCY, call Student Health, x6666

For other Emergencies, call Public Safety, x5555 Courtesy phones are located on the second floor of the Science Building.

COURSE SCHEDULE:

Week	Day	Date	Topic	Chapter	Lab

* * * * *Please see full outline below.* * * * *

Course Summary

Introduction to Sustainability will cover sustainability definitions, assessment & actions from a multidisciplinary perspective to help learners create a personal definition that will inform their actions. It will teach students how to understand the complex confluence of social systems, environmental economics & ecological literacy. Themes of pluralism, resource conservation and systems thinking will provide the framework to analyze how to meet one's basic needs of food, water, shelter, energy & transportation. Students will have the opportunity to work on hands-on projects.

Learning Outcomes

Learning Outcomes are **what you will learn** in class. They are listed in the table (Assessment Rubric) below. Use the Assessment Rubric to determine **how well you learn** (give yourself a "grade" of accomplished, developing or beginning). **What are your strengths? What are the new skills or perspectives that you need to acquire?**

Assessment Rubric			
LEARNING OUTCOMES	LEVELS OF ACHIEVEMENT		
	Accomplished	Developing	Beginning
Examine sustainability from a multidisciplinary perspective (define).	Student can list 2-3 elements in a definition of sustainability (verbally & in writing) describe several influential perspectives & why one perspective may be inadequate.	Learner can describe 1-2 elements in a definition of sustainability & discuss influential perspectives.	Student can list 1-2 elements in a definition of sustainability.
Apply tools & methods to conduct sustainability assessment (measure).	Student has the ability to discuss & use 2-3 assessment tools/methods as well as list some advantages & disadvantages of each method.	Participant can list and use 1-2 assessment tools/methods.	Student can list 1 sustainability assessment tool/methods.
Create a personal definition of sustainability.	Participant can summarily describe their personal definition & explain influential values.	Student is beginning to outline their personal definition of sustainability.	Student is forming a personal definition.
Implement 1-3 actions that lead toward sustainability.	Learner can describe several sustainability actions, their impact & has implemented 1-3 personal or community actions.	Student understands several actions & has embraced 1-2.	Student is learning what action may lead toward sustainability.
Articulate the main tenets of pluralism & why it is important to advancing sustainability.	Student can define pluralism & why it is important to sustainability. She handles differing perspectives productively & sensitively while honoring diversity.	Student can generally describe pluralism & openly listens to alternative opinions.	Participant becomes defensive when hearing opinions that differ from their own.
Apply basic systems thinking concepts.	Learner can describe a system, name several necessary components & discuss how an action may affect that system. He understands why systems thinking is necessary to advancing sustainability.	Student understands & can articulate several aspects of systems thinking & can discuss why systems thinking is necessary to sustainability.	Participant can list a few elements that make up a system or understands why it's important.
Utilize beginning collaboration tools (see note below).	Student helps her team discuss issues to reach consensus, works toward mutual understanding & seeks alternative perspectives. She asks clarifying questions & encourages open inquiry.	Student is generally open to making decisions by vote & encourages others to participate equally.	Learner allows decision making to happen by majority rule even though others might disagree silently.

NOTE: All LCC classes strive to increase **basic communication skills including the ability to summarize points verbally & in writing; compare & contrast perspectives; speak respectfully; listen without interrupting speaker; & respond with consideration to others**. These skills are crucial to develop effective collaboration.

A+ = 97 – 100 %	B = 83 – 86	C- + 70 – 72
A = 93 – 96	B- + 80 – 82	D = 60 – 69
A- = 90 – 92	C+ = 77 – 79	F = 59 or below
B+ = 87 – 89	C = 73 – 76	

Calculation of Grade ~ CREDIT OPTION: Grade Policy

Grades are determined according to the table at left. Excellent performance is rewarded with an "A," which, **by definition occurs infrequently**. **It is your responsibility to discuss your grade & class performance when/if you have questions.**

Attendance / Participation / Reading: 30% of grade

TEN – TWELVE in class EXERCISES, MINI RESEARCH PROJECTS OR OTHER ACTIVITIES, along with daily participation will be required. Participation also includes **reading the assignments before class**. **You may not miss more than 4 days of class to receive passing grade**. If participation comes easily to you, please hone your listening skills.

Journal: 20% of grade

Keep a journal & turn it in as requested. RECORD CLASS ACTIVITIES, **thoughts, feelings, assumptions & ranting opinions**. **Be creative and have fun!** Do NOT use for a log of events or class notes.

One Written Assignment: 30% of grade

One written assignment is required using single-spaced; DOUBLE-SIDED; 1" margins; 12 pt font. **Email to instructor as an attachment** (NOT in email body) **or hand in double-sided paper copy**. **Use a formal writing style including an introduction, body & conclusion; cite all sources in text & with reference list** (APA or MLA). Grade based on grammar & spelling, sentence structure, flow of logic, creativity, content, citations, following instructions.

Team Presentation: 20% of grade

You will present once IN A GROUP. Presentation should be interesting & may **not** use PowerPoint; artistry encouraged. A handout will provide details. Encourage participation by all members as grade shared by all.

Weekly Outline of Reading & Activities ~ READ WEEKLY READINGS BEFORE first day of classes

Week 1, 3/31/08: Introduction to class & each other, review syllabus, reading, course requirements. **GO OUTSIDE?**

- **Begin Journal**: What does sustainability mean to you? How do you define sustainability right now?
- *Readings:* 1) Handout: "What is sustainability?" 2) Doppelt, p. 39-56

Week 1, 4/2/08: Questions? Discussion: **What is sustainability? GO OUTSIDE!?**

- **Student activities: Get ready for ACTION!** Sign up for student activities.
- *Readings:* 1) Doppelt, p. 7-22

Week 2, 4/7/08: **Guest: Jennifer Hayward**, Lane Community College, Sustainability Coordinator ~ **Sustainability at Lane.** What has Lane already done? What's next? How can students become/stay involved? What is STARS?

- *Readings:* 1) Sustainable Practices at Lane; see www.lanecc.edu/sustainability

Week 2, 4/9/08: F**oundations of sustainability: Systems Theories & Practices.** What are they & can we change systems?

- *Readings:* 1) Doppelt, p. 23-38. *View DVD: What is home water conservation: Residential tips on video*. Retrievable from: http://www.expertvillage.com/video-series/838_home-water-conservation.htm

Week 3, 4/14/08: **Guest: Felicity Fahy**, City of Eugene, Sustainability Manager. *Readings:* 1) Doppelt, p. 70-85, 229-242

Week 3, 4/16/08: **Effective communication:** fiber of the **social fabric of sustainability.** Practice strategies **OUTSIDE!**

- *Readings:* 1) Handout: Isaacs, W. N. "Dialogic leadership" in *The Systems Thinker*, p. 1-5; 2) Ross, R. "Skillful discussion"… in *The fifth discipline fieldbook,* p. 242-243.

Week 4, 4/21/08**: Economics, Peace & Globalism**. Guest: Stan Taylor, Ph.D., LCC Faculty, Peace Center Co-Chair

- *Readings:* 1) Doppelt, p. 57-69

Week 4, 4/23/08: **TO DO IN CLASS:** Calculate eco footprint at: http://www.myfootprint.org/ in computer lab next door

- **TO DO IN CLASS:** Perform basic water use survey at LCC campus. *Readings:* 1) Doppelt, p. 46

Week 5, 4/28/08: **Sustainability Assessment: how do we know sustainability when we see it**? Research STARS+++ (Sustainability Tracking, Assessment, and Rating System) online in computer lab next door

- *Readings:* Emailed Handouts 1) AASHE STARS at: http://www.aashe.org/stars/STARS0.4.pdf pps 7-11; 2) Stark, T., "Sustainability Assessment Tools & Methods"

Week 5, 4/30/08: **GO OUTSIDE!? Work together on project outside: Garden? RWH?**

Week 6, 5/5/08**: Social fabric: power & privilege.** How are power & privilege connected to social & environmental justice? Importance of pluralism & distribution of power. Guest: Susie Cousar, LCC Faculty (**OUTSIDE?**)**.** *Readings:* 1) Doppelt, p. 87-107

Week 6, 5/7/08: **Meeting basic needs: water**. Rainwater harvesting presentation & **Tour Rainwater Harvesting System**

- *Readings:* 1) Emailed Handout Fascinating Water Facts, p. 1-3

Week 7, 5/12/08: Guest: Shelley Mort, LCC Faculty, over-fishing & class discussion. **Meeting the world's food needs: can fishing & aquaculture meet the need for protein sustainably?**

- *Readings: 1)* Wolowicz, Karen, "The Fishprint of Aquaculture: Can the Blue Revolution be Sustainable?" from http://www.rprogress.org/publications/2005/The_Fishprint_of_Aquaculture_1205.pdf
- *Activities:* **HOMEWORK**: Eat local for one week.

Week 7, 5/14/08: **CATCH UP**: How is class going? What questions do you have? Brief student project updates **OUTSIDE!** *Readings*: 1) Doppelt, p. 87-107. *Activities:* Watch "Kilowatt Ours"

Week 8, 5/19/08**: LCC Energy Management Program.** Guest: Roger Ebbage, Energy Management Programs Coordinator (**GO OUTSIDE – Tour Solar System??**)

- *Readings:* 1) About the Northwest Energy Education Institute at www.nweei.org & 2) Doppelt, p. 108-128

Week 8, 5/21/08: **Reuse, "waste" & recycling.** Guest: Mike Sims, Recycling Coordinator OUTSIDE – Tour with Mike

- *Readings:* 1) Baker, L., "From grit to glory;" 2) Doppelt, p. 129-144

Week 9, 5/26/08 Memorial Day – NO SCHOOL

Week 9, 5/28/08**: Ecological planning & design.** Student-led lecturette???
Readings: 1) Roseland (in Aberley's *Futures by design*), Eco planning, p. 70 – 78; 2) Doppelt, p. 146-172

Week 10, 6/2/08: **Guest:** Jack Stephens, Natural Building Network presentation & **OUTSIDE! Cob mixing exercise**
Readings: 1) Doppelt, p. 173-184; 2) Bernard & Young, The ecology of hope (Optional: Doppelt, p. 185-209)

Week 10, 6/4/08: **Student Project Updates / Presentations.** Course synthesis & wrap up. *Readings: 1)* Doppelt, p. 243-248

Finals week: June 9 – 13, 2008. Test date/time to be announced.