

Earth System Science III Lab (ES 106 L)

Syllabus—Spring 2010

Western Oregon University

Instructor: Karen Brown

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Office: Natural Science 213

Office Hours: Tu/Th 8:30-9:30 AM, Tu 1:00-2:00 PM

Wednesday 9 to 11 AM, or by appointment

When sending email, **in the subject** of the email please reference this class:

i.e. "ES 106 Lab, Friday 1 PM", to receive a prompt reply

0 Credit Hours—Your grade in ES 106 lab will comprise 25% of your ES 106 course grade, assigned by your lecture instructor. I will report your lab grade as a percentage to your lecture instructor, to be included as part of your lecture grade. **You will NOT receive a passing grade in ES 106 if you do not achieve at least 60% in lab**

ES 106 lab is a two hour period. We meet in NS 017. Class meetings are (circle yours)

Monday	Monday	Tuesday	Wednesday
9:00 to 10:50 AM	1:00 to 2:50 PM	4:00 to 5:50 PM	1:00 to 2:50 PM

Attend at THIS time, unless you have unusual circumstances and have approval from both instructors to attend at another time!! A schedule is available on my lab website.

If you will regularly attend a different class, have that instructor add you to their roll.

Textbooks and materials

Earth System Science III (ES 106), Lab Manual, Available at WOU Bookstore. You must have an unused copy of the lab manual. **Bring entire manual to each class.**

Scientific calculator (that can calculate trig functions). **Bring this to each class.**

Earth Science 12th Ed., by Edward J. Tarbuck and Frederick K. Lutgens, 2009, Prentice Hall, Pearson Education, New Jersey, ISBN-13: 978-0-13-602007-3. **Bring to lab.**

Conceptual Physical Science, 4th ed., by Hewitt, Suchocki and Hewitt, 2008, Pearson Education, San Francisco, ISBN 13-978-0-321-51695-4

Grading

There are seven lab exercises and one quiz for this lab class. This lab will be valued at 100 points. Prelab homework, class activities, and the post labs are worth a total of 70 points. The practical quiz at the end of the term is worth 30 points.

Prelab homework: Please read through the lab exercise before coming to class. Each lab exercise has pre-lab questions. These need to be turned in at the beginning of class. The purpose of these questions is to introduce the topic to you before coming to class. Each set of **pre-lab questions will be worth 2 points**.

Lab activities are **due at the end of the class period**. Answer all the parts of the lab assigned, even if you do not need to turn in that page. (Questions on the practical quiz may come from any part of the lab, so make sure your reports are complete.) Each lab activity report will have a value of **6 points for the activities and 2 points for the postlab** questions. The postlab questions may be due at the end of class, or the start of the next class meeting. Check with the instructor before you leave without turning it in

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Correct answers to the lab exercises and pre-labs will be posted on moodle <http://online.wou.edu> by Monday morning of the week after you complete the lab. Be sure to check your lab against this key when your paper is returned to you.

There will be **no credit for late work in this class**. If you have to miss your regular class, try to get in to another lab that week to do the activities, because there is little opportunity to do them after they are put away on Thursday afternoon. **Have the other instructor sign the lab, and turn it in to my office as soon as you finish the activities. It is due on the day you complete it. Do not turn it in to the other instructor or keep it until the following week.**

You are encouraged to work in lab-groups on the lab exercises. You may learn more by helping your lab partners. If you are the recipient of help, be sure you understand the problem and the solution/answer, so you can do similar problems on the practical quiz at the end of the term. Do not cite “human error” without specifying the source of that error. Always show all calculations, with units, in each instance you need to do calculations

Practical quiz: There will be a practical quiz at the end of the term. The date is the last lab class day of the term, not during finals week. The quiz will include material from all of the labs completed during the term. It will be comprehensive. The quiz problems will be like questions and activities done on the lab exercises. You will be able to use **your lab notebook** as reference during the quiz, so be sure to bring your notebook on quiz day. Be sure you go to the web page for my ES 106 lab to correct your labs with the right responses to the questions. If you missed a lab, fill out the activities from the website key. **You may not use printed keys or share lab reports for the lab quiz;** only your own handwritten work is allowed. You must take this quiz, not another instructor’s quiz. If you are not here for your quiz day, have written verification of your emergency situation when you ask for consideration to make up the quiz. The practical quiz will be an individual effort, without the assistance of your lab partners. It is worth **30 points**.

Tentative Schedule

March 29-April 1	None	(ES 100 labs start week 2 of classes)
April 5-8	Lab 1	Properties of Water
April 12-15	Lab 2	Heat and Temperature
April 19-22	Lab 3	Introduction to Oceanography
April 26-29	Lab 4	Dynamics of Ocean Floor
May 3-6	Lab 5	Earth-Sun Relations, Atmospheric Heating
May 10-13	Lab 6	Moisture in the Atmosphere
May 17-20	Lab 7	Weather—Oregon Climate
May 24-26, June 3	{	QUIZ Bring a scantron, your lab notebook and a calculator! Lab 8 Climate Change—Have this done for extra credit!!

If you are having problems attending class, contact me as soon as practicable. If you know ahead of time that you will not be in class for the quiz, contact me before the quiz to make some arrangements. If you miss the quiz without prior notice, please have some written evidence of your emergency situation, or use the **Office of Student Affairs** to communicate. I am understanding, but need verification of each case.

If you find yourself unable to complete this class, due to personal circumstances, you may request a grade report of ‘incomplete’. You must be passing when you request this; you must go through **Office of Student Affairs** to verify your situation; and you must sign a plan of completion with me. See page 24 of the WOU 2009-10 Catalog for details.

Below is some collected information from Western Oregon University 2009-10 Catalog. These are included here because they are important to your success in this class. Each excerpt is noted with the page on which it appears in the catalog.

Spring term Calendar

Classes begin	Monday, March 29, 2010
Fee payment & add/drop begin	Monday, March 29, 2010
Last day to pay fees without penalty	Friday, April 2, 2010
Last day to add courses, change grade options, elect graduate/undergraduate credit or pay fees	Friday, April 9, 2010
Last day to drop courses	Friday, May 7, 2010
Registration for next term	Monday, May 17 - Friday, May 21
Memorial Day Holiday	Monday, May 31, 2010
Final examination week	Monday, June 7 - Friday, June 11
Spring term ends	Friday, June 11, 2010

(inside front cover)

University Mission Statement

Western Oregon University is a comprehensive university that creates personalized learning opportunities, supports the advancement of knowledge for the public good and maximizes individual and professional development. Our environment is open to the exchange of ideas, where discovery, creativity and critical thinking flourish, and students succeed. (p. 3)

College of Liberal Arts and Sciences Mission Statement

Dean Chair Stephen Scheck

The College of Liberal Arts and Sciences provides the central learning experience for all undergraduate students at Western Oregon University. The faculty are committed to engaging students in academic discovery and intellectual growth via the core curriculum, major and minor baccalaureate curricula, and mastery in select graduate programs.

Program Objectives

1. Engage students in scholarly pursuits that benefit their preparation for life-long learning and societal engagement.
2. Provide an environment where students may develop disciplinary competencies necessary for their chosen career fields.
3. Provide opportunities for faculty-student mentoring and out-of-classroom learning opportunities.

For more information, see the Web site at: www.wou.edu/las. (p. 37)

Natural Sciences and Mathematics Division

Division Chair Stephen Taylor

The Natural Sciences and Mathematics Division is responsible for majors and minors in biology, chemistry, Earth science, integrated science, mathematics and natural science.

Mission

To offer quality liberal arts education in Biology, Chemistry, Earth Science, Mathematics, Physics and Pre-Professional Studies. Our students have the opportunity to acquire and assimilate mathematical and scientific knowledge, that they may broaden and refine their understanding of the ever-changing world around them, both while at Western Oregon University and throughout their lives.

Program Objectives

1. To help students internalize and apply both the scientific method and major scientific and mathematical concepts and principles.
2. To enhance students' reasoning and problem solving skills.
3. To improve students' individual and collaborative skills in preparation for the global scientific and mathematical challenges of the 21st century. More detailed program information, including program admission requirements can be obtained by contacting the division at: 503-838-8206, or on the Web at www.wou.edu/las/natsci_math/nsmdiv.html.

(p. 38)

Institutional aspirations for learning

Students at WOU will be challenged to achieve their highest potential through a rigorous and stimulating curriculum. Between 2004 and 2005, a set of educational goals called Institutional Aspirations for Learning were collaboratively developed by our faculty after focused discussions about the fundamental aims of liberal education in the 21st century. These aspirations constitute the core competencies, skills, experiences and values credited to, and expected of, WOU's educational process and its graduates. We believe that these aspirations are the basic building blocks of a high-quality education as well as the foundations for productive careers, life long development and informed citizenship on a local, national and global level.

1. Students will develop more refined critical thinking skills, including advanced analytical, logical and quantitative reasoning abilities as well as excellent problem-solving skills.
2. Students will develop effective communicative abilities, including listening, observing, speaking, writing and dialoguing.
3. Students will become active readers with an enhanced ability to carefully, closely and thoughtfully read a range of texts.
4. Students will acquire field or discipline specific knowledge and they will understand disciplinary modes of intellectual inquiry.
5. Students will develop an interdisciplinary and integrative perspective as they recognize, explore, appreciate and engage the interconnections between disciplines.
6. Students will develop advanced research abilities and they will demonstrate improvements in their information and media literacy.
7. Students will learn how to use appropriate technologies.
8. Students will acquire and demonstrate competencies, skills, attributes and values necessary for successful participation in a diverse, pluralistic and increasingly interdependent world.
9. Students will be able to work effectively in teams.
10. Students will strive to be well-balanced persons capable of making thoughtful and healthy choices.
11. Students will be able to apply theory in relevant, appropriate and reflective ways. (p. 6)

Disability Services

The Office of Disability Services facilitates appropriate accommodations on campus for students and visitors with disabilities. Services provided by the office help ensure that students with disabilities are able to participate fully in all of WOU's programs and activities. The needs of each student who has a disability are assessed on an individual basis so that each receives the most appropriate accommodations and/or support. The following list of services provided by the Office of Disability Services are the most commonly requested.

- Accessibility assistance: wheelchair accessibility to buildings and campus grounds, communication equipment (FM systems, audio-looped rooms, TTYs, closed caption decoders, amplified phones), CC-TV, Braille, scanner, voice output computer access and other technical equipment
- Accessibility aides: note takers, readers, transcribers, classroom assistants, exam proctors
- Advisement: academic, career, personal/social
- Advocacy: for appropriate accommodations, alternative testing, preferred accessibility aid
- Communication aides: Sign language interpreters who use student's preferred signed communication mode (from ASL to MCE), and oral interpreters are provided upon request for classes, school sponsored activities, and meetings with faculty and staff
- Empowerment: Through networking groups, workshops and interaction with the office staff, students learn of their rights and how to obtain services they need.
- Leisure and social activities: Accessibility assistance and aids are provided to encourage and support the students' full participation in all parts of campus life.
- On-campus housing: accessible to deaf, hard of hearing, blind students and students using wheelchairs or other assistive mobility aids
- Orientation: to the campus and services provided by the Office of Disability Services as well as general university services available

Please contact the Office of Disability Services for more information at 503-838-8250 V/TTY or e-mail ods@wou.edu. (p. 30)

Academic Advising and Learning Center

Director Karen Sullivan-Vance

Academic Advising Center

Academic advising at WOU is a developmental process designed to help students define their life and career values and goals in relation to their academic plan. Both the student and adviser have a shared responsibility in the ongoing dialogue that helps students maximize their educational experience at WOU. All undergraduate students are required to meet with their academic adviser at least once a term until a degree plan is filed with the Registrar's Office. Students are encouraged to meet with their adviser when they have questions about their educational goals. Students have access to faculty advisers in their major and minor areas of study. In addition, the Academic Advising and Learning Center's professional advisers can advise students about requirements, along with pre-education and undecided students.

The Academic Advising and Learning Center works with:

- Students to identify their life and career goals in relation to possible academic programs
- Undecided students who are exploring different majors
- Students transferring into WOU from another institution
- Students on academic warning, probation or suspension
- Academic requirements for graduation, including the Liberal Arts Core Curriculum (LACC)

For more information, call 503-838-8428 V/TTY, e-mail advising@wou.edu or go to the Web page www.wou.edu/advising.

Learning Center

Academic skills, including study skills and time management, are essential for college success. The Learning Center helps students assess their current academic skills and develop new skills to help them become successful. Services are provided to WOU students at no charge.

Services at the Learning Center include:

- Peer tutoring in most academic subjects by appointment
- Drop-in math tutoring hours
- Tutor-assisted study groups
- Individual study skills assessment and assistance (time management, test taking, note taking, listening, textbook reading, etc.)
- Study skills resource library (videos, books, software and handouts)
- Resource study material for tests (CBEST, Praxis, GRE)
- Student computer lab

Tutoring assistance is offered in most academic subjects by peer tutors who have been recommended by faculty. The tutor's goal is to help students improve their knowledge and develop better study habits. Students must be currently enrolled in the requested class at WOU for tutoring. For more information, call 503-838-8501, (503-838-8428 TTY), e-mail turnerj@wou.edu, or go to the web page www.wou.edu/learning. (p. 39)

Standards of Conduct

The following list of prohibited forms of conduct is not all inclusive since it is not possible to list all potential violations.

1. Academic Dishonesty, which includes but is not limited to:

- a. *Cheating* - intentional use, or attempted use of artifice, deception, fraud, and/or misrepresentation of one's academic work;
- b. *Fabrication* - unauthorized falsification and/or invention of any information or citation in any academic exercise;
- c. *Facilitating dishonesty* - helping or attempting to help another person commit an act of academic dishonesty. This includes students who substitute for other persons in examinations or represent as their own papers, reports, or any other academic work of others;
- d. *Plagiarism* - representing without giving credit the words, data, or ideas of another person as one's own work in any academic exercise. This includes submitting, in whole or in part, prewritten term papers of another or the research of another, including but not limited to the product of commercial vendors who sell or distribute such materials, and the appropriation and/or use of electronic data of another person or persons as one's own, or using such data without giving proper credit for it; or
- e. *Any use or attempted use of electronic devices* in gaining an illegal advantage in academic work in which the use of these devices is prohibited, and such devices include but are not limited to cell phones, PDAs, laptops, programmable calculators, removable disk drives, etc. (p. 30-31)

Statement on discrimination, including sexual harassment

Western Oregon University is committed to cultivating an educational and work environment in which all individuals are treated with respect and dignity. Each individual has the right to learn and work in an atmosphere that promotes equal educational and employment opportunities and prohibits discriminatory practices, including harassment. Western Oregon University expects relationships across campus will be free from bias, prejudice and harassment.

This policy statement is intended to reaffirm Western Oregon University's prohibition against discrimination and harassment, clarify types of prohibited conduct, and provide an effective complaint procedure to individuals who believe they have observed or have been subject to prohibited conduct.

Discrimination

Discrimination, for the purposes of this policy, is defined as any act or practice, in form or operation, whether intended or unintended, that unreasonably differentiates among persons on the basis of race, color, religion, national origin, age, sex, marital status, sexual orientation, veteran status or disability or any other status protected under the law.

Harassment

Harassment, for the purposes of this policy, is defined as conduct that creates an intimidating, hostile, or degrading environment that would interfere with the work or academic performance of a reasonable person of the complainant's protected status.

Sexual Harassment

Sexual Harassment, whether or not it be by direct physical attack, as defined below. Sexual harassment includes, but is not limited to, sexual advances, requests or suggestions to engage in sexual conduct, and other physical and expressive behavior of a sexual nature when:

- 1.) Submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment or education; or
- 2.) Submission to or rejection of such conduct by an individual is used as the basis for academic or employment decisions affecting the individual; or
- 3.) Such conduct has the purpose or effect of substantially interfering with an individual's academic or professional performance or creates an intimidating or hostile employment, educational, or living environment. (p. 4)

Additional information is available at

http://www.wou.edu/admin/hr/sh_taskforce/index.php

To request a complete hard copy of the discrimination and harassment policy and complaint procedure; to discuss a sexual harassment, harassment or discrimination concern; or to file a sexual harassment, harassment or discrimination complaint, contact Judy Vanderburg at 503-838-8131 or vanderj@wou.edu. (p. 4)