*Note: Yellow highlight indicates new policies related to the Public Health Emergency. Ver. 2.0, updated April 1, 2022*

**ES106 Lab – Oceans and Atmosphere (CRN30193)**
**POLICIES AND PROCEDURES**
**Western Oregon University**
**Spring Term 2022 – March 28 to June 10 – In Person Synchronous**


INSTRUCTOR: Dr. S. Taylor
VIRTUAL OFFICE HOURS: R 12-2 PM
*(via Zoom)* By Appointment
OFFICE: RM 210 Natural Sciences Bldg
PHONE: (w) 838-8398 (cell) 541-760-9216
E-MAIL: taylors@wou.edu
WEB SITE: www.wou.edu/taylor


TAYLOR PERSONAL OFFICE ZOOM MEETING URL:
https://wou-edu.zoom.us/j/8273666289?pwd=bitrNUtBNzNZNUYycFF6NlpzT2ZKUT09

ES106 LAB WEEKLY IN-PERSON CLASS MEETINGS: Mondays 12 PM – 2 PM

***NOTE: In-person lab meetings do not begin until Week 2 of Spring term 2022, on Monday April 4***

ES106 LAB CANVAS SHELL: https://www.wou.edu/portal
ES106 CLASS WEB SITE: https://people.wou.edu/~taylors/gs106/ES106_home.html

**COURSE DESCRIPTION:** This is a laboratory course designed to accompany ES106 Lecture. his course focuses on human impacts to the Earth system, including chemical and physical aspects of water, water pollution, oceanography, the atmosphere, air pollution, meteorology and global climate change. Active learning strategies threaded through the lecture portion of the course and inquiry-based labs emphasize scientific reasoning and application of appropriate techniques to define and solve problems.

**IN-PERSON MODE:**
This course will be conducted entirely in a real-time in-person learning mode format. As a team, we will be using the following communication tools: (1) Personal one-on-one classroom interactions, (2) WOU email system (taylors@wou.edu), (3) ES106 Class Web Site: (https://people.wou.edu/~taylors/gs106/ES106_home.html), (4) ES302 Class Canvas Shell: (www.wou.edu/portal).

**In-Person Class Meetings:** The class assignments and labs will be conducted mostly in-person in synchronous mode, ***however there will be outside class assignments and homework due each week on Mondays via Canvas upload.***

**Virtual Office Hours:** Standing office hours will be held during the posted days / times above using the Zoom personal meeting tool. The instructor has an account with a virtual room set up that has a static web address with following URL: https://wou-edu.zoom.us/j/8273666289?pwd=bitrNUtBNzNZNUYycFF6NlpzT2ZKUT09 Each week, at the listed day and time, I will have a meeting space open for students to drop in as needed. Enter the URL into a web browser, click link to join meeting, enter your full name and email address in the login box to enter virtual meeting room. Voice, video and text / chat options are available. If you experience difficulty connecting to the Zoom space during office hours, Plan B give me a call directly on cell phone at 541-760-9216, or email anytime, that works as well.

**COURSE GOALS AND LEARNING OBJECTIVES:**
ES106 learning objectives are aligned with WOU Earth Science program outcomes (PO) and select components of the LEAP (Liberal Education and America's Promise; http://aacu.org/leap) learning outcomes developed by the Association of American Colleges and Universities (Inquiry and Analysis IA, Integrative Learning IL). Upon successful completion of ES106, students will be able to demonstrate minimum competency in the following program areas, with alignment to University (ULO) and General Education Learning Outcomes (GELO):

1. Investigate properties of water and explain its essential role in the Earth system (PO3, GELO2, ULO-IA),
2. Describe chemical attributes of seawater and physical ocean processes (PO3, GELO2, ULO-IA),
3. Categorize properties of the atmosphere and identify processes that influence weather (PO1, GELO1),
4. Give examples of how the Earth's climate system has changed through time (PO1, GELO1),
5. Examine and analyze data to interpret oceanic and atmospheric processes (PO3, GELO2, ULO-IA),
6. Assess human impacts on the environment (GELO2, ULO-IL).

**TEXTBOOKS AND READINGS:** Earth Science 106 Laboratory Manual (digital version provided by instructor via web download) and other readings as assigned (also provided by instructor).

**CLASS NOTES:**
A comprehensive set of instructor class notes are available for download via the internet. The class web site is accessed via the following URLs http://www.wou.edu/taylor https://people.wou.edu/~taylors/gs106/ES106_home.html and follow the links to the "ES106 Lab" section, links will also be posted in the Canvas course shell. The class notes are available as Adobe Acrobat Reader files (*.pdf file), are in outline form and are very comprehensive. Study guides and answer keys will also be posted on the web site as the term progresses.

**EVALUATIONS AND EXPECTATIONS:** Student performance in the lab will be evaluated on the basis of in-class lab exercises. The following is a breakdown of evaluation points:

| | | | |
|---|---|---|---|
| Lab Exercises | (8 x 10 pts) | 80 pts | |
| Lab Quizzes | (2 ea x 25 pts) | 50 pts | |
| Homework/Pop Quizzes/Assignments | | | 25 pts |
| Participation and Attendance | | 25 pts | |
| | Total | 180 pts | |

**Grades will be renormalized to a percentage out of 100% total for entry in overall class grade; "Passing Grade" = Greater than or equal to 60% of total points possible; "Failing Grade" = Less than 60% of total points possible.*

**Laboratory Exercises:** The labs represent a significant component of the class. All lecture sections of ES106 will be distributed across several lab instructors. Be aware that some of you will have the same lecture and lab instructor, while others will not. The following are the terms and conditions of the Lab-portion of the class:

(1) You must pass the lab with an average score > 60% to pass the course! For example, if you have an "A" in lecture, and an "F" in lab, you will receive an "F" for the entire course. Your lab score will be factored into your final lecture grade as prescribed by the instructor.
(2) Lab exercises turned in late will result in automatic point(s) reduction, at the discretion of the lab instructor.
(3) The specific lab instructor has the final say in all lab grading. The lecture instructors will abide by the lab instructors grading procedure.

**MAKE-UP LABS:** Under NO circumstances will make-up labs be administered without prior arrangement (at least five days) and good reason, with a signed administrative excuse. Please show up on lab day!

**DIGITAL LAB SUBMISSIONS: All assignments will be submitted on a rolling weekly basis via the class Canvas Course Shell (www.wou.edu/portal).**

**PRE-LAB READING QUESTIONS AND POST-LAB ASSESSMENT:** A set of pre-lab reading questions will be distributed by your instructor during the first week of class. The pre-lab questions are designed to get you to read through the lab PRIOR to the lab period, so that you are prepared to work on the lab efficiently. Students must complete the pre-lab questions prior to attending lab during a given week. The pre-lab

questions will form part of the final lab assignment and will be graded accordingly.
**CHANGE OF SYLLABUS - POP QUIZZES - UNANNOUNCED HOMEWORK ASSIGNMENTS:** The instructor reserves the right to modify the syllabus and class schedule at any time during the term. Students will be notified of such changes in a timely manner. The instructor also reserves the right to administer pop-quizzes and assign unscheduled homework / class assignments at any time. All students will be responsible for completing this work and it will comprise part of the final class grade.

**OTHER REQUIRED MATERIALS, SOFTWARE AND HARDWARE:**
Students will also need a scientific calculator, ruler, protractor, colored pencils, and frequent access to a personal computer or compatible device connected to the internet. You will be required to use these materials during labs and exams. Given the online mode of delivery students will need access to computer hardware, software (including MS Office, MS Word, MS Excel or alternative compatible products), and a stable internet connection capable of streaming video. MS Office365, including Excel, is available free to all WOU students, for more information connecting visit the following URL: https://wou.edu/tech/remote-access/ You will be required to complete and electronically submit worksheets using MS Word and Adobe Acrobat PDF file formats derived from a Windows 10 Operating System. If you are using Apple IOS / MAC software products, you will be required to import and export to Windows-compatible MS word and Adobe PDF file formats. This process may involve scanning hand-written work with your phone or scanner, and / or converting to a windows-compatible image file format including JPG and PDF. Please plan accordingly, or you will have trouble successfully completing the class.

**STUDENTS WITH DISABILITIES**:
Any student who has a disability that requires accommodation, please make an appointment to chat with me.

**INSTRUCTOR TIMELINE FOR ONLINE RESPONSE; GRADING EXAMS AND ASSIGNMENTS:**
The instructor will respond to emails / messages ASAP and within 24 hours (usually much faster, but understand that it could be up to a day before I respond). On weekends and in the evening, it may take a bit longer, but I will make a point of getting back to you as quickly as possible. The instructor's class grades are typically due to registrar's office the week following the class end date. All exams, lab materials, and assignments submitted by students throughout the term will be graded by that time, however the professor will make an effort to return graded materials within two weeks of the assigned due date. Answer keys and other resources will be posted to assist with students evaluating their work on a weekly basis. ***Grade Reports: I will be using the Canvas gradebook tool. In addition, I will be personally reviewing your work submitted via Canvas upload, grading it manually, and recording scores in my own spreadsheet / gradebook, outside of Canvas. I will send you individual grade updates via email as the session progresses.***

**ES106 LAB SCHEDULE – SPRING 2022 - CRN30131 – Taylor – Monday 12:00-2:00 PM**

This outline should be considered tentative at best. The following schedule may be modified as the class framework evolves throughout the term. **Note 1:** Given the Public Health Emergency, large measures of patience and flexibility will be required by the team. The Professor will guide you through and give plenty of instructions on how and when to complete your work, with plenty of time to submit your work. *(Ver. 2.0 Updated April 1, 2022)*

| Week | Date | Class Activity |
|---|---|---|
| 1 | March 28, 2022 | **No Lab Meeting Week 1** *(Attend Lecture Week 1)* |
| 2 | April 4, 2022 | Class Introduction / Syllabus Review<br>Properties of Water<br>**Lab Meeting 12:00-13:50 PM** |
| 3 | April 11, 2022 | Heat and Temperature<br>**Lab Meeting 12:00-13:50 PM**<br>**Week 2 Assignments Due for Canvas Upload by Monday April 11, 12 PM** |
| 4 | April 18, 2022 | Introduction to Oceanography<br>**Lab Meeting 12:00-13:50 PM**<br>**Week 3 Assignments Due for Canvas Upload by Monday April 18, 12 PM** |
| 5 | April 25, 2022 | The Dynamic Ocean Floor<br>**Lab Meeting 12:00-13:50 PM**<br>**Week 4 Assignments Due for Canvas Upload by Monday April 25, 12 PM** |
| 6 | May 2, 2022 | Earth-Sun Relations and Atmospheric Heating<br>**Lab Meeting 12:00-13:50 PM**<br>**Week 5 Assignments Due for Canvas Upload by Monday May 2, 12 PM**<br>**Online Lab Quiz 1 Thursday May 5, 2022; Drop-In 8 AM-11 PM, Canvas** |
| 7 | May 9, 2022 | Moisture in Atmosphere<br>**Lab Meeting 12:00-13:50 PM**<br>**Week 6 Assignments Due for Canvas Upload by Monday May 9, 12 PM** |
| 8 | May 16, 2022 | Climate of Oregon<br>**Lab Meeting 12:00-13:50 PM**<br>**Week 7 Assignments Due for Canvas Upload by Monday May 16, 12 PM** |
| 9 | May 23, 2022 | Global Climate Change Take-Home Assignment<br>**No Lab Meeting**<br>**Week 8 Assignments Due for Canvas Upload by Monday May 23, 12 PM** |
| 10 | May 30, 2022 | Open<br>**No Lab Meeting**<br>**Week 9 Assignments Due for Canvas Upload by Monday May 30, 12 PM**<br>**Online Lab Quiz 2 Thursday June 2, 2022; Drop-In 8 AM-11 PM, Canvas** |
| 11 | June 6, 2022 | Open<br>**No Lab Meeting**<br>**Final Exam Week** |