**Sustainability 390 Climate Change**

**Winter 2024**

**Class Meets W 10 - 11:50**

**Location: BEL 108**

**Instructor: Michael S. McGlade, Ph.D. (**he, him, él)

Office Location: BEL 211

Office Hours: Tuesday 12-3; Wednesday 12-2

e-mail: [mcgladm@wou.edu](mailto:mcgladm@wou.edu) (please do not use Canvas messaging system) voice: 503-838-8381

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This course fulfills part of the general education requirement GEI Science, Tech, & Society.

Required Books, Readings, and Documentary Accesses to Purchase:

-Book: Earle, Steven (2021) A Brief History of the Earth’s Climate: Everyone’s Guide to the Science of Climate Change. Gabriola Island, BC: New Society Publishers. (in WOU Bookstore)

-Some readings will be available through Canvas.

-And just in case I come across something more you should set aside about $10 for documentary access, and/or making copies/printouts for assignments due. Details TBA.

Course Description Analysis and reflection on climate change historically and on the current period of human-induced global warming. In addition to physical processes, students will learn about impacts (environmental, economic and equity) of human induced climatic instability, and the challenge of sustainability in a changing world.

Course Goals

1. Explore historical and current climate change  
   **Program Outcome 3:** SUST-PO3
2. Demonstrate critical thinking regarding cause and effect  
   **Program Outcome 2:** SUST-PO2
3. Critique and understand past and current climate science  
   **Program Outcome 3:** SUST-PO3
4. Explore historical and current climate change  
   **Program Outcome 3:** SUST-PO3
5. Demonstrate critical thinking regarding cause and effect  
   **Program Outcome 2:** SUST-PO2

Course Requirements Quizzes and exams will consist mostly of short answer, and essay questions. No make-up examinations and/or quizzes will be given except for documented student participation in an official activity of WOU including interscholastic athletic events, and documented illnesses. Course requires regular attendance, from the beginning of class through the end. It is not designed to accommodate students who miss class. Unexcused partial or full absence of more than two days will result in the lowering of one letter grade at the end of the term. Excused absences include documented student participation in an official activity of WOU including interscholastic athletic events, and documented illnesses. If your employment conflicts with your attendance you should look for another class with a different meeting time.

Student In-Class Presentations

Students will make a presentation that falls within one or more of the following topics related to climate change: 1) mitigation, 2) adaptation, 3) climate justice, or 4) politics & policy. The presentations should last 6 – 8 minutes and include a large font outline or graph or other visual prop that can be put on the document camera. (we won’t do fully online presentations due to the login time needed - unless you have something that you feel is worth it). There will be a Canvas page as well to post a 200 to 250 word summary. For sourcing you may use either the scholarly literature (1 or more sources) or curated sites such as Inside Climate News or Yale Climate Connections. If you have other sources in mind please run them by me for approval!

No devices with screens, including cellphones, tablets, and laptop computers, may be used anytime during class. There will be a break near the middle of the class which serves as a time when you may check messages if needed.

One climate data project will be assigned, with written and video instructions in Canvas (dates TBA). There may be a few brief, unannounced quizzes to reinforce learning. More on this later! Stay tuned to Canvas. Minor forums/essays may add more points possible to this list:

Approximate points possible (subject to change)

|  |  |
| --- | --- |
| Activity | # points |
| weekly quizzes (6) | 60 |
| lab exercise | 20 |
| in-class presentation & posting | 10-20 |
| mid term | 25 |
| final exam (not comprehensive) | 20 |

Grading scale (%) is A: 90-100, B: 80-89, C: 70-79, D: 60-69, F < 60.

Plus and minus system used for upper and lower 2 percent.

**TENTATIVE SCHEDULE OF ACTIVITIES (BUT CONSULT CANVAS FOR FINAL WORD, ALWAYS)**

|  |  |  |
| --- | --- | --- |
| Dates | Topic(s) | Core Reading/Viewing\* |
| Week 1  January 10 | Introduction  Climate Controls, Slowly Warming Sun | Earle, Chapters 1 & 2 |
| Week 2  January 17 | Plate Tectonics &  Volcanic Eruptions  **Closed note weekly quiz over material of previous week, including lecture** | Earle, Chapters 3 & 4  & more to be announced (TBA) (see Canvas) |
| Week 3  January 24 | Orbital Mechanisms & Ocean Currents  **weekly quiz over material of previous week, including lecture** | Earle, Chapters 5 & 6  & more TBA (see Canvas) |
| Week 4  Jan 31 | Short Term Solar Cycles,  Collisions Extra Terrestrial Objects  **weekly quiz over material of previous week, including lecture** | Earle, Chapters 7 & 8  & more TBA (see Canvas) |
| **student presentations begin** |  |
| Week 5  February 7 | Anthropogenic Climate Change,  Tipping Points  **weekly quiz** | Earle, Chapters 9 & 10  & more TBA (see Canvas) |  |  |
| **student presentations** |  |
| Week 6  February 14 | Impacts  **Mid term** (covers all of Earle and related material, except Ch. 11) | To be announced |
| Week 7  February 21 | Impacts  climate data exercise assigned | To be announced |
| **weekly quiz**  **student presentations** |  |
| Week 8  February 28 | Mitigation/Prevention | Earle, Chapter 11 |
| **weekly quiz**  **student presentations** |  |
| Week 9  March 6 | Mitigation/Prevention and Adaptation  **climate data exercise due** | To be announced |
|  | **NO student presentations** |  |
| Week 10  March 13 | Adaptation  **student presentations** | To be announced |
| **Final Wednesday March 20, 8 am** | **Note that final is 8 am, not 10 am** |  |

\*other topics may be assigned; with Canvas being the final authority. Note that all subjects and activities are subject to modification.

Academic dishonesty consists of representing the work of others as your own and/or using notes or other aids completed by others during an examination. Students who engage in such actions may receive no credit for the assignment or examination in question and will be subject to University discipline as outlined in the Code of Student Responsibility. If you have further questions, please consult the Social Science Division policy on academic dishonesty and the Code of Student Responsibility: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://wou.edu/studentconduct/files/2017/10/CSR-09.01.17.pdf

*WOU values diversity and inclusion; we are committed to fostering full participation for all students. Please notify your instructor if there are aspects of the instruction or design resulting in barriers to your participation.*

*Disability related accommodations are determined through the Office of Disability Services (ODS). If you, as a student, believe you may be eligible for disability related accommodations please contact ODS, they would be happy to work with you. ODS notifies students and faculty members of approved academic accommodations and coordinates implementation of accommodations.*

*Academic Programs Services Center (APSC) 405*

*503-838-8250 (voice)*

*https://wou.edu/disabilityservices/*

*ods@wou.edu*