GEO 160 Introduction to Physical Geography
Liquid Space

DETAILS

Spring 2024
Mondays & Wednesdays | On-demand learning between 8:30 & 20:30

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Zoom Room (ZR)
A Zoom Room is a customizable zoom meeting. Individual students or groups of students need only contact me to arrange one. I am generally available seven days a week between 10:00am and 6:00pm California time.

The best way to contact me is to email me.
Title your email GEO 160.

DESCRIPTION

Translated from Greek, geography means writing about the earth, or simply earth writing. In less poetic terms, geography is an academic field that includes the study of the spatial patterns of both human and physical phenomena. By bridging both social and environmental sciences, geographers are uniquely suited to provide insight into complex spatial interactions that manifest as disease pandemics, climate change, urban design, and cultural complexes.

Drawing from the academic disciplines of oceanography and hydrology, this course foregrounds physical phenomena. It uses the ubiquitous water molecule as its organizational spine. Students will first learn about the unique and life sustaining chemical qualities of water. Each section of this course then explores a different aspect of liquid

space in order to answer important questions about Earth. What causes ocean tides? Why is the ocean sometimes blue and sometimes green? What is the difference between a wave and a current? Where does sand come from? Where does it go? How are weathering, mass wasting and erosion related? Why do rivers flood? Why don't creeks freeze in the winter? How does ocean water mix? Why does marine garbage collect in certain ocean spaces?

This class is only accessible through time-independent modules on AIMS. Each module will require approximately one hour and fifteen minutes of student engagement through recorded lectures, quizzes, and lecture forums. This course is uncoupled from the space of a classroom, and it is uncoupled from the time of a class period. Quizzes and exams must be taken during a 12 hour window (8:30am to 8:30pm)of each class day. However lecture slides and recorded lectures will be made available to students one week before the day of each class. Lecture forum posts and homework assignments may be completed in advance; however they must be submitted before the due date/time. Because they are propelled by prime mover executive summaries, webinars must be engaged with and posted to between 8:30am and 8:30pm the day of the webinar.

OBJECTIVES

Upon completion of this course students will:

1. Have gained insight into geography as an academic discipline.
2. Have gained insight into Earth and its physical systems.
3. Be able to think spatially about physical processes such as swell, erosion, river flows, ocean currents, and tides.
4. Have gained a deep understanding of the central roles that water plays in enabling, maintaining, and threatening life on Earth.
5. Be able to think spatially about human environment interactions including coastal erosion and marine pollution.
6. Be comfortable using geographical terminology in written communication.

AILA ELEMENTS

Like applied international liberal arts, the academic field of geography pivots on interconnectivity. Geography foregrounds spatial specificity within a wider understanding of physical, biological, cultural, and economic connectivity. My geography courses emerge from my anthropological research methods, my sociological reasoning, the pragmatism I gained in studying urban planning, in operating an award winning restaurant, and in real estate development.

This course roots in the geographical term teleconnection. In physical geography teleconnection refers to the complex relationships between oceanic and atmospheric anomalies over great distances. In human geography teleconnection is about complex relationships between time, space, people, and events.

Finally, I foreground a pedagogy called *writing to learn*. This is a reading and writing rich course. Therefore, it will aid and abet students in developing the core communication skills necessary to prepare for and produce their capstone research project.

AILA ACTIVITIES & PROJECTS

This is an intellectually challenging course. Unlike in-person classes that occur in lecture halls and during class periods, this course places multiple time-management and self-motivational demands on students. The high levels of self-reliance and self-efficacy required to succeed in this course will stand students in good stead as their academic and

professional careers unfold and consequently the guiding hands of mentors and peers lose their reassuring presence.

The project upon which this course turns is the amalgamation of an academic book (in its entirety) with the sophisticated geographical theory presented my lectures. The linchpin to this coalescence is effective communication. My underpinning pedagogy is writing-to-learn, a pedagogy that generates skills in effective communication. Writing-to-learn develops and nurtures critical reading skills and effective writing skills.

READING

Required Book
Tides: The Science and Spirit of the Ocean; Jonathan White

Suggested Books
Plastic Soup: An Atlas of Ocean Pollution; Michiel Roscam Abbing

Exploring Physical Geography - (2018 Second Edition); Stephen Reynolds et al.

ASSESSMENT

Quizzes	30
Reading Responses	24
Lecture Forum Participation	16
Final Exam (oral)	30
Total Points Possible	100

Quizzes
There will be a short, timed quiz after each lectures. Quizzes cover lecture material. They will comprise essay questions.

Reading Responses
Reading responses assess students' ability to synthesize material presented in lectures with material presented in the readings. Reading responses are homework assignments and will be assigned via communication through AIMS.

Lecture Participation
My recorded lectures close with a forum question, to which students are required to post an answer. Lecture forum posts should comprise between 75 and 150 words.

I am in California, which is approximately a day and a half behind Japan. On the day of the lecture (California time) I participate in the forum. I post a comment to each student's answer to my discussion question. I maintain a log detailing each student's engagement in each webinar forum. Lecture participation grades are based exclusively on this log.

Final Exam
The final will cover material presented in lectures and in the reading assignments during the entire semester. The final exam is an ORAL examination, which will be conducted via a 20 minute zoom meeting with each student during finals week.

ASSESSMENT POLICIES

Submission Requirements
Students are expected to submit all written assignments, including forum posts, webinar posts, and discussion questions on the AIMS platform.

Makeup Work
Aside from exceptional situations, there will be no chance to make up missed exams or quizzes or turn assignments in past their due day/time. Proof of an exceptional situation must be submitted to me in writing and signed by the appropriate authority within 24 hours of the beginning of the missed exam. I reserve the right to define an exceptional situation and furthermore to make all final decisions relating to amending, redoing, or making up late or incomplete work.

GENERAL POLICIES

Academic Dishonesty
Academic dishonesty consists of plagiarism, cheating, fabrication and falsification, multiple submission of the same work, misuse of academic materials, and complicity in the academic dishonesty other others. Academic dishonesty will not be tolerated.

In accordance with AIU policies and good practices in higher education, acts of academic dishonesty such as plagiarism, cheating, forgery (on a paper, examination, test, or other assignment) may result in the failure of the course. An act of academic dishonesty during the final examination, or assignment in lieu of the final examination, may result in failure of all courses registered in the relevant academic term. Cases of academic dishonesty will be reported to the Office of Student Records for relevant action.

Attendance
Learning is an ongoing process; one that builds upon previously acquired insights and skills. Consistent and engaged attendance is vital for success in this course. I reserve the right to deal with exceptional or extended absences on a case-by-case basis.

Special Needs
If you require accommodations, please alert me of your needs on the first day of class so that I can work with you and the administration to meet them.

Civility & Classroom Decorum
Learning is a participatory process; therefore student contribution to class is important. This course is based on forum discussions. Disagreement is part of all scholarly debate. Colleagues can disagree *and* maintain respect for each other and one another's views. I insist that we strive to learn from the differences that manifest while debating the merit of theoretical and empirical evidence by maintaining an atmosphere of civility during forums.

SCHEDULE

Liquid Space
April 8 Introductions

Astrophysics
April 10 Third Rock from the Sun
April 15 Third Rock from the Sun

Water

April 17	The Properties of Water
April 22	The Properties of Water
April 24	The Properties of Water

Wind & Weather

May 8	Atmospheric Energy Transfer - Earth's Energy Budget
May 13	Air-Sea Interactions

Waves

May 15	Simple Tidal Theory
May 20	Complex Tidal Theory
May 22	Wave Generation & Decay
May 27	Swell, Seiche & Tsunami
May 29	Bathymetry, Refraction & Shoaling
June 3	Swell Energy Transfer

Erosion & Deposition

June 5	Erosional & Depositional Features
June 10	Migrating Sand & Erosion Mitigation
June 12	*Virtual Field Trip*
June 17	Weathering, Mass Wasting & Erosion

Hydrology

June 19	Precipitation to Runoff
June 24	Precipitation to Runoff
June 26	River Flow & Sedimentation
July 1	Floods & Flood Mitigation
July 3	Cataclysmic Flooding

Ocean Currents

July 8	Wind-driven Currents
July 10	Wind-driven Currents
July 15	Thermohaline Circulation

July 17	Course Epilogue
July 22-25	Oral Final Examination