**UH 390: Global Issues in the Sciences**

***Living with our Earth: Earth science case studies from the Pacific NW and Himalaya***

**TU TH 1:25-2:40pm**

**Instructor:** Dr. Beth Pratt-Sitaula

**Phone:**  509-899-3480

**Email:**

**Office Hours:**

**Office:**

**Required Textbooks:** None

**Required Items:** Several

* 3-ring binder w/ front pocket for reading notes and homework assignments OR equivalent stored electronically on your laptop – BRING DAILY
* Team laptop – each learning team must have at least one laptop present – BRING DAILY
* Google Earth\* – computers used for this class will need this program  
  Get Google Earth for free at: <http://www.google.com/earth/index.html>
* Personal laptop\*\* – All individuals will need laptops for two test days – BRING TO TESTS  
  *I recommend just bringing it daily if you have one. Particularly on Day 2 (1/12) everyone with a laptop or pad should bring it.*

\*If you don’t have a personal laptop, you can rent one for the times needed from the WSU Tech Store (<http://infotech.wsu.edu/techstore/index.html>). Ask them to load Google Earth at the time of rental.

\*\*All computers also need to have Microsoft Office (esp. Excel) and an internet browser, but I am assuming this is standard.

**Course Overview**

“Civilization exists by geological consent, subject to change without notice.” (Attributed to American writer, Will Durant) The only thing constant about our planet’s earth-air-water system is its continual change—yet we build our societies around the premise that things will stay relatively stable no matter what choices we make. This is a delusion. However, the devastating outcomes of many “natural” catastrophes are largely preventable. For example, the loss of life could have been greatly reduced in Japan (March 2011 earthquake & tsunami) or New Orleans (Hurricane Katrina 2005), had scientists and society worked together to better communicate risk and prepare appropriately. In many ways we build our own “manmade” catastrophes by not taking the changing Earth fully into account. This course will explore basic geologic systems through the lens of better understanding natural and manmade catastrophes in the Pacific Northwest and the Himalaya; and how we, personally and as societies, can better prevent disasters. A particular emphasis will be placed on understanding risks from earthquakes and climate change.

**Course Goals**

Students will demonstrate **fluency** in the application of science to problem solving; **literacy**, in written and oral formats, in diverse scientific disciplines; and **ability** to transfer skills gained in UH 199 or 290 to understand how scientific thinking is applied to global issues.

**Common UH390 Learning Outcomes** (relevance to Honors College Learning Goals in *italics*)

Self in Society: Students will understand how *individual behaviors and choices* are connected to global issues. They will understand the role of science in creating and providing solutions to global problems.

Critical Thinking: Students will use a scientific framework to critically understand the *intersection between science and social factors* that shape global issues.

Information Literacy: Students will demonstrate literacy in several science disciplines and employ skills necessary to *access and evaluate diverse sources of information*.

Communication: Students will c*ommunicate effectively* in discussions concerning the importance of science in addressing global issues; the student will use *appropriate oral, visual, and written media* for different types of audiences.

**Course-specific Learning Outcomes**

* Students will be able to describe basic Earth processes related to plate tectonics, earthquakes, tsunami, water cycling, and climate in general and for the Pacific Northwest and Himalaya regions in particular.
* Students will be able to analyze Earth science data sets using Excel and Google Earth and use the results to support scientific arguments.
* Students will apply the knowledge and skills outlined above to assessing risk and proposing mitigation and/or adaption strategies for geohazards that threaten the Pacific Northwest and the Himalayan region.

**Course Expectations & Policies**

This course is not about *me* teaching *you* **–** it is about you making the deliberate and conscious decision to learn. My role is to help facilitate your development as an informed citizen, which I will do to the utmost of my abilities. I am open to your suggestions about how the course could be changed or made better. My aim is to have an open, professional dialogue between us; if you have suggestions, specific problems, concerns or questions please discuss these with me as they arise during the quarter. I would prefer to deal with issues as they come up rather than finding out about them on final course evaluations when it is too late to fix them.

In order to best facilitate your learning, my expectations are as follows:

* Engage your brain: Come to class ready to contribute actively. Success in this course will require both active class participation and several hours of study time for each hour of class. Depending on your science background, you may need to spend more or less time.
* Think critically: This course is designed to help you develop your critical thinking abilities; these life skills will help you analyze, infer, evaluate, and make reasoned judgments related to many facets of life.
* Use common sense: Do not cheat on assignments. Do not plagiarize others’ work (you will get a zero and be reported to the Office of Student Conduct). For more information on WSU’s academic integrity policy, refer to: <http://conduct.wsu.edu/default.asp?PageID=5025> and <http://www.wsulibs.wsu.edu/plagiarism/main.html>
* Act professionally: This course is part of your transition from student to citizen and professional. As such, *I expect you to attend class, arrive on time, help others, and turn assignments in on time.* Thus two corollaries to this heading are:
  + Late assignments will lose 5% credit per day.
  + Come to class and come on time: **More than one unexcused absence** will cause you to **fail the class**. As mentioned above, let me know about any potential conflicts **ahead of time** so we can try to work something out. Or, in an extreme circumstance, let me know as soon as you can after and present medical or legal documentation.

**Learning Teams**

As part of an activity on the first day, you will be randomly assigned to a learning team. You will work with this team in and out of class for the rest of the semester. You should exchange contact information and sit together each day.

**Communication**

I will communicate with you via your @wsu.edu email. It is your responsibility to check it regularly or have it forwarded to whatever email you use more regularly.

**Assignments, readings, and gradebook on ANGEL:**

All course materials and the most current due dates will be available in ANGEL. Check there for required readings, reading content outlines, and homework assignments before each class!

<http://lms.wsu.edu>

**Assignments & grading**

|  |  |
| --- | --- |
| Assignment | Points |
| Homework, reading notes, & class participation (33 each) | 100 |
| 4 Group activity write-ups (75 each) | 300 |
| 2 Team case study projects (150 each) | 300 |
| 2 Tests (150 each) | 300 |
| **TOTAL** | **1000** |

**Grade Distribution**

100-93% = A, 92.9-90% = A-, 89.9-87% = B+, 86.9-83% = B, 82.9-80% = B-, 79.9-77% = C+, 76.9-73% = C, 72.9-70% = C-, 69.9%-67% = D+, 66.9-63% = D, 62.9-60% = D-, and <60% = F

**Due dates/times**

* Questions for me to address in class: email to me BY NOON of class day
* Homework/reading due on class days: completed BEFORE class
* Any assignment due on a non-class day: 5 PM

**Readings, reading content outline notes, homework, participation, and attendance**

* Readings: Reading assignments for each class session can be found on ANGEL. With each reading assignment will be a content outline that you should use as the basis of your note taking. When you are done, print out the content outline notes and put in your 3-ring binder. If you have a question/s about the topics in the reading email me before noon on the day of class and I will address them in class.
* Homework: Some days, there will also be a homework assignment which should be completed, and (unless otherwise instructed) printed out and put in the binder.
* You will need the knowledge and skills gained from the readings and homework to participate effectively in class activities and pass the tests. Bring the binder to class each day. Several times during the semester, I will ask to see your binder and your grade will depend on the completion of required tasks.
* Participation: To receive full credit for participation, you should contribute every day to your team’s work and/or the overall class discussion. Occasional or regular evidence of non-attention or activities not related to class will result in low to no credit for participation.
* Attendance will be recorded each day when you turn in a “Murkiest Point” in the last few minutes of class. Each day you will write down what was least clear to you about the day’s class. You will also write your name and class number (which I will give you). I will start the next class by addressing topics students found unclear. If everything was perfectly clear, write down the most interesting thing you learned. You must write something to receive credit for attending that day.

**Geoscience Content Class Activities – group work but rotating primary responsibility**

Your team will work nearly every day on some sort of activity. Some of these will simply underpin knowledge or skills needed for later tasks or tests and will not be graded. Four of the larger activities will take ~2 class period and need to be written up and turned in on the specified due date (3-6 days after the second class period to work on it). Each member of the team will take a turn being the leader of one activity. While everyone will be responsible for contributing to the activity and understanding the material, one person will “lead”. These “leaders” will be assigned to the activities in reverse alphabetical order (i.e. person whose last name is latest in the alphabet will go first) but are welcome to switch with a team mate if you both inform me via email. I will look for evidence that each activity’s “leader” is truly shouldering extra effort on the write-up and it will be reflected in your Participation grade for the term. This leader should be the one to correspond with me as needed during the activity and should be the one to send the completed assignment to me by the due date.

**Team Case Study Projects**

Twice during the semester the class will do larger case study projects which will be written up as a group. Points received by individual team members will be weighted by peer reviews of contributed effort.

**Tests**

* Test review activities: Before each test you will have an opportunity to compete for extra credit points through a process of writing and answering test review questions.
* Test questions: Will emphasize critical thinking skills and be a combination of multiple choice and written answer.

If you have just read this entire syllabus, email me before noon on the second day of class with a question or statement about the syllabus and “extra credit” in the subject line, and you will start the semester with 5 extra credit points!

**WSU Disability Statement**

Students with Disabilities: Reasonable accommodations are available for students with a documented disability. If you have a disability and may need accommodations to fully participate in this class, please visit the Disability Resource Center (DRC). All accommodations MUST be approved through the DRC (Washington Building, Room 217). Please stop by or call 509-335-3417 to make an appointment with a disability specialist.

**WSU Safety**

Please familiarize yourself with information regarding campus emergencies/school closings by visiting: <http://oem.wsu.edu/emergencies>