**Physical Geography**

**Geography 392**

T,R 2:00-3:50 Room: CH 101

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**Course Description**

Physical Geography is a discipline that seeks to understand the details and relationships between a multitude of physical processes. It overlaps with the disciplines of geology, biology, hydrology and climatology, but it is much more inclusive than these disciplines. Physical Geography seeks to pull together the details of specialized sciences and answer the questions of why something exists at a specific location, what processes are involved, and how do humans interact and affect the phenomena.

This class will provide you with an understanding of the forces that create the unique landscapes of the Earth. If you are thoughtful and disciplined, you will leave the class with the ability to interpret the landscapes you visit, understand the historic processes that created it, and the current processes that will lead it to change through time.

The class will consist of a mixture of lecture, discussion, and student presentations. In order to succeed, you must complete assigned readings and take very detailed notes during lectures.

**Prerequisite:** Geography 105 or permission of instructor.

**Optional Text**: Physical Geography: Science and Systems of the Human Environment 3rd ed, Strahler & Strahler, Wiley.

*(You can likely get an inexpensive edition on-line. I will also put a copy on reserve in the Library)*

**Course Requirements**

There will be two exams, two class presentations, four article reviews, and a final paper.

**Exams**: Questions will be a mixture of fill in the blank, short essay, and multiple choice. There are two exams. Each is worth 100 points.

**Article Reviews**

We will read and discuss 4 articles. These will be available on my web page (www.wou.edu/~vanstem). Every student must write a 1+ page summary of each article and 4 discussion questions. Students will sign up to lead discussions. Each summary is worth 15pts, for a total of 60pts.

**Paper and Presentations:**

Choose a place you are sincerely curious about and have not researched in previous courses. If you are curious and passionate about the place, then the research and writing will be fun and educational.

The purpose of the project is to have you learn how to explain “why” a special place is the way it is. This appears to be a very simple question, but it isn’t. The character of a place is the result of a very complex interrelationship of numerous factors. Some of these factors include: climate, culture, geology, biology, economics etc. Besides all factors being related to one another, there is a complicating temporal dimension as well. All of the above change through time, be it days or billions of years. It is your job to weave together a complex tapestry that explains “why”!

**The most difficult part of the work will be to intelligently discuss processes and interrelationships.** Your grade will be heavily weighted upon this.

You need to include a list of works cited (this is different than a generic bibliography). A “works cited” lists only the references you have cited within your text. **Anything you write that is other than your opinion or data you have personally gathered MUST have a citation.** Also, any figures or photographs that you did not personally make/take must have a source listed. **If you fail to cite accurately and frequently throughout the paper, you will receive no greater than a "C" on the project (even if the rest is perfect)**. The **minimum** number of citations is **8**, with **3** of those from "peer-reviewed" literature.

**Don’t use any information from non-credible sources.**

Example of credible and non-credible sources related to Hawaii:

Credible: Peer Reviewed journal articles (ex: Science, Nature, Biogeography etc)

US Geologic Survey

NRCS (Natural Resource Conservation Service)

UNESCO (United Nations Educational, Scientific and Cultural Org)

NASA

University of Hawaii Biodiversity and Mapping Program

You can use Wikipedia to find citations to appropriate articles, but **you cannot cite information directly from Wikipedia.**

Non-Credible:

Tour Hawaii

Ed’s Page of Hawaii Biogeography

Articles from Newspapers

“Go Hawaii” tourism site

**ASK ME** if you are not 100% sure!

Papers and Presentations will be graded on content, clarity and the depth of the discussion of processes. ***Any errors in grammar or spelling will significantly lower your grade***. Also, be certain that you can clearly explain everything you have written. Including “impressive” techno-jargon which you cannot explain will only hurt your grade.

You must write all of the text yourself, and **cutting and pasting from web sites will not be tolerated**. This is plagiarism and it will result in a **failing grade**.

**Topic Examples:**

Mohave and Colorado Deserts Biosphere Reserve

-discuss why this is a desert region.

-discuss the effects of the arid climate on vegetation adaptations.

-discuss rock types and how this controls the morphology of the landscape.

-discuss flash floods and the formation of alluvial fans.

Yellowstone Biosphere Reserve

-discuss geothermal activity due to the “hot spot” in the mantle.

-discuss the topography of the landscape in relation to historic volcanic eruptions.

-discuss river systems and their role sculpting the "grand canyon of Yellowstone".

-discuss the role of fire in the ecosystem.

**Presentations**

A four minute presentation of your project progress will be given Thursday of week 4.

This presentation is informal and professional. No powerpoint presentation is necessary. My goal is to keep you on track and get feedback before you complete the final project.

The formal ten minute **Power Point** presentation of your work is due

Thursday of week 9.

 Summary of Project related requirements

i) Title and draft outline

ii) Four minute presentation and refined outline

iii) Eight (+) page paper (double spaced)

iv) Ten minute formal presentation

v) Electronic copy of presentation

**Grading**

Every student has the opportunity to get an "A". If all of you score 92% or higher throughout the class, I will guarantee you an "A" grade. If you attend every class, ask questions, and take detailed notes, you will succeed. I generally grade 100-90 = A, 89-80 = B, 79-70 = C, 69-60 = D. If this scale is adjusted, it will be adjusted to your advantage.

Exam 1 100 pts

Exam 2 100 pts

Final Paper 100 pts

Presentation of final project 60 pts

Article Reviews 60 pts *(15 points each)*

Worksheets/Quizzes 20 pts *(points may vary)*

Presentation on research progress 25 pts

and refined outline

Project title and outline 10 pts

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475 pts possible

**Late Assignments lose 10%/day.** Hand in even if very late. If the assignments are 1-2 days late and your first offense, no points will be deducted.

**Tentative Schedule**

Week 1

Tectonic Systems, Landforms, and Earthquakes

*reading: Chapter 13 and 14*

Week 2

**Project Title and Draft Outline due Tuesday**

**Article #1 discussion and review paper due Thursday**

Climate Processes

-global winds, air pressure, and precipitation patterns

*reading: focus on the above topics in Chapter 7*

Week 3

**Article #2 discussion and review paper due Tuesday** (no class Thursday)

Climate Distributions

-climate classification

*reading: chapters 9-11*

Week 4

**Presentations of Project progress (4 minutes) and Refined Outline and all Sources Due Thursday**

Biogeography

-global distributions of flora and fauna, evolutionary processes

*reading: chapters 23 and 24*

Week 5

**Exam 1 (Thursday)**

Biogeography (cont.)

-case studies of the Galapagos Islands, Amazon and others

Week 6

**Article #3 discussion and review paper due Thursday**

Soils Geography

*Reading: chapter 21*

Week 7

**Article #4 discussion and review paper due Thursday**

 Rivers and Groundwater Systems

*Reading: parts of chapters 16 and 17*

Week 8

Historic Climate Distributions

-glaciers and the ice age

*reading: Chapter 20*

Week 9

**Exam 2 (Tuesday)**

**Project Papers due Thursday**

**Project Presentations begin Thursday (Attendance Required)**

Week 10

**Project Presentations (Attendance Required)**

**No Final Exam**