



**Course** ENVR/GEOG/GEOS 2302: The Global Environment  
**Term** Fall 2017  
**Meetings** Tuesdays & Thursdays 2:30 – 3:45 P.M., GR 3.402A & B

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**Instructor:** Dr. Anthony Cummings  
**Office:** GR 3.528  
**Office Hours:** Tuesdays 11:00 – 1:00 P.M. or by appointment  
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## GENERAL COURSE INFORMATION

### Description:

This class is an introduction to the physical aspects of the world's geography, emphasizing the major systems within the natural environment: climate; vegetation; soils; hydrology (water); and landforms. We will examine the processes and environmental interactions that allowed for these systems to be shaped within the atmosphere, biosphere, lithosphere, and hydrosphere. The distribution of natural features around the earth and explanations for why these features are found where they are will be addressed and how global systems work to produce regional differences. Some attention will also be placed on the interaction between humans and the 'natural systems' that function in these environments.

### Learning outcomes:

At the end of the class students will be able to:

- describe laws and theories that are critical to physical geography and the earth system
- observe, analyze, evaluate and synthesize facts on Earth's physical phenomena
- use numerical data to arrive at informed conclusions on Earth's physical phenomena
- work effectively with others to examine and articulate issues critical to the global environment

### Texts and Materials:

The lecture materials are derived from a number of sources (mainly textbooks). These sources, listed below, are available through the UT Dallas Bookstore (1), online merchants, including Amazon.com (2, 3), and online (4). The texts are listed as required and recommended.

### Required texts:

1. Hess, D. & Tasa, D.G. 2014. **McKnight's Physical Geography: A Landscape Appreciation**, 11<sup>th</sup> Edition, Pearson
2. Hammond. 2001. **Odyssey World Atlas** or **ANY WORLD ATLAS or Google Earth.**

### Recommended texts:

3. Christopherson, R. W. 2009. **Geosystems: An Introduction to Physical Geography.**
4. \*Ritter, M. E. 2011. **The Physical Environment: an Introduction to Physical Geography.**  
Available at [http://www.earthonlinemedia.com/ebooks/tpe\\_3e/title\\_page.html](http://www.earthonlinemedia.com/ebooks/tpe_3e/title_page.html) last visited 8/17/2015.  
\*Students are not required to print material available electronically.

## COURSE POLICIES

### Requirements:

This class meets twice per week and you are required to attend lectures, complete assigned readings

And take notes. Lecture slides will also be uploaded to eLearning **after** class. Exams will be based on lectures and readings, while quizzes will be based on the required readings only (please refer to the schedule on page 4). In addition to lecture notes, there is a list of natural features (page 3 of this syllabus) which you must be able to identify on a world map for each exam.

### **Grading and attendance:**

The final grade for this class will be determined from six main areas: exams, quizzes, classroom participation, a group project, in-class exercises, and attendance.

**Exams and quizzes:** There are two exams and five quizzes in this class. Exams include multiple-choice, matching, short written answer and essay-type questions, while quizzes will vary from five (5) short questions or multiple-choice questions. Quizzes cover readings for a specified period (please see academic organizer on page 4).

**Exercises:** There are fourteen (14) in-class exercises and assignments distributed across the semester (please see academic organizer on page 4) and you are required to submit correct responses for ten (10) in order to gain the exercise portion of the grade. Exercise responses are due **one week** after they are presented in class. The format for each exercise response will vary and will be announced in class along with the submission requirements, including whether they should be submitted via eLearning or hard copy. **You must be in class on the day an exercise is presented in order to receive credit for a submission**, but you are welcomed to complete all exercises and check for the correct answers with me or the TA. Questions on the content of exercises are also likely to show up on exams and quizzes - so please ensure you understand these.

**Attendance:** The attendance grade will be computed from 6 random days distributed throughout the semester. Each student is allowed one free miss on a random day, however, if you are absent on more than one random day, the proportion of the 5% (1% per day) of class participation grade will be deducted from your overall course grade.

**Group project:** a small group (4-5 persons) will research a topic of their choice or one assigned by the professor and present their findings to the class. Details on the final project will be presented on the first day of class and will be available on eLearning.

**Make-up Exams:** The dates for exams and quizzes are listed on page 4. In fairness to other students, proof of absence (e.g. a doctor's letter) will be required if you are ill or have a personal emergency and will need to make up an exam or quiz.

**Late work:** Late submission of work will be penalized 10 % per day.

Grade breakdown and criteria:

Exams (3 @ 16.67 % each)	50%
One group project	15 %
3 quizzes (5 % each)	15 %
Exercises	10 %
Participation and homework	5 %
Attendance	5 %

Letter grades: A+ > 95; A = 93-95; A- = 90-92; B+ = 87-89; B = 83-86; B- = 80-82; C+ = 77-79; C = 73-76; C- = 70-72; D+ = 67-69; D = 63-66; D- = 60-62; F = <59

### **ACADEMIC HONESTY & CONDUCT**

Please refer to the Academic Integrity Policy for the University of Texas at Dallas:

<http://www.utdallas.edu/deanofstudents/dishonesty/>.

**Comet Creed:** *This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same: "As a Comet, I pledge honesty, integrity, and service in all that I do."*

## CLASSROOM CITIZENSHIP

Show respect for others by arriving to class on time and staying the full length of the lecture or discussion. Allow others to speak, even when you may disagree with them. Please turn off your cellphones while in class unless it's being used for classwork. Food and beverages are not allowed into the classroom.

## DISABILITY

Please contact the Office of Student Affairs (<http://www.utdallas.edu/studentaffairs/>) to complete the relevant paperwork to share with me.

**UT Dallas Syllabus Policies and Procedures:** The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus. Please go to <http://go.utdallas.edu/syllabus-policies> to review these.

## PLACE LOCATIONS FOR EXAMS

Understanding where things are in the world will help you to gain perspective when we talk about the distribution of various phenomena in class. You can get the Atlas listed in this outline, but there are also atlases in the library and online that can show you where these features are located. The list below gives you the features you should know for each exam.

### Exam 1

#### **Continents**

North America  
South America  
Eurasia  
Africa  
Australia  
Antarctica

#### **Water Bodies**

Atlantic Ocean  
Pacific Ocean  
Indian Ocean  
Arctic Ocean

#### **Mountain Ranges**

Rocky Mountains  
Sierra Nevada (USA)  
Andes  
Alps  
Himalayas

#### **Other Features**

Great Rift Valley  
Arabian Peninsula

#### **Rivers**

Amazon  
Mississippi  
Nile  
Yangtze (Chang Jiang)  
Congo

#### **Islands**

Greenland  
Iceland

### Exam 2

#### **Water Bodies**

Caribbean Sea  
Red Sea  
Black Sea  
Great Lakes (know each)  
Gulf of Mexico  
Baltic Sea  
Hudson Bay  
Mediterranean Sea

#### **Mountain Ranges**

Appalachians  
Cascades  
Urals  
Atlas

#### **Other Features**

Great Plains  
Great Basin  
Sahara Desert

#### **Rivers**

Rio Grande  
Euphrates  
Colorado  
Brahmaputra  
Yellow (Huang He)

#### **Islands**

Islands of Japan (collectively)  
Philippines (collectively)

### Exam 3

#### **Water Bodies**

Bering Sea  
Adriatic Sea  
Aral Sea  
Caspian Sea  
Persian Gulf  
Arabian Sea  
South China Sea  
Bay of Bengal  
Lake Baikal

#### **Mountain Ranges**

Pyrenees  
Zagros  
Caucasus

#### **Other Features**

Kalahari Desert  
Gobi Desert  
Tibetan Plateau

#### **Rivers**

Mekong  
Volga  
Danube  
Thames  
Orinoco

#### **Islands**

New Zealand (collectively)  
Madagascar

## ACADEMIC ORGANIZER

	Week	Date	Topic	Hess Chapter (s)
FROM BELOW: THE SOLID	1	22-Aug	Introductions	
		24-Aug	Physical Geography/ Exercise 1: Locations on Earth (Latitude & Longitude; Time zones)	Chapters 1 & 13
	2	29-Aug	Structure of the Earth/Exercise 2: Overview of GIS and TopoMaps	Chapters 2 & 13
		31 - Aug	Tectonism & Volcanism/ Exercise 3: Minerals and Rocks	Chapters 13 & 14
FROM ABOVE: THE ATMOSPHERE	3	5-Sep	Composition & Vertical Structure of the Atmosphere	Chapters 3
		7-Sep	Earth's Motion Relative to the Sun; Solar and Terrestrial Radiation I/ Exercise 4: Earth - Sun Relations <b>Quiz 1 (Materials from 22-Aug to 7-Sep)</b>	Chapters 1 & 4
	4	12-Sep	Solar and Terrestrial Radiation II/ Exam Review	Chapter 2
		14-Sep	<b>Exam 1 (Everything from 23-Aug to 13-Sep)</b>	
	5	19-Sep	Global Energy Balance	Chapter 4
		21-Sep	Atmospheric Forces & Motion/Exercise 5: Air Pollution	Chapters 3 & 5
	6	26-Sep	General Circulation of the Atmosphere/Exercise 6: Tropical Cyclones	Chapter 5
		28-Sep	Atmosphere-Ocean Interactions/Exercise 7: El Niño; <b>Quiz 2 (Materials from 19-Sep to 28-Sep)</b>	Chapter 5
	7	3-Oct	Moisture in the Atmosphere/ Exercise 8: Moisture and Humidity	Chapters 4 & 6
		5-Oct	Atmospheric Stability; Precipitation/ Exercise 9: Adiabatic Processes	Chapter 6
	8	10-Oct	Air Masses and Fronts; Midlatitude Cyclones	Chapter 6 & 7
		12-Oct	Clouds /Exercise 10: Weather Maps	Chapter 6
	9	17-Oct	Distribution of Climate Types/Exercise 11: Climographs and Climate Distribution/Review for Exam 2	Chapter 8
		19-Oct	<b>Exam 2 (Everything from 19-Sep to 17-Oct)</b>	
IN THE MIDDLE: AT THE EARTH'S SURFACE	10	24- Oct	Climatic Variability and its measurement	Chapter 7
		26-Oct	Biogeographic Processes – Vegetation Description, Influences and Distribution	Chapters 10 & 11
	11	31-Oct	Soil Profiles and Soil Forming Factors; Soil Distribution/ Exercise 12: Soil classification	Chapter 10
		2-Nov	Hydrology/Exercise 13: Flood Probability	Chapters 9 & 12
	12	7-Nov	Erosional Slope Processes and Forms	Chapter 15
		9-Nov	<b>Geography of Energy/Quiz 3 (Materials from 24-Oct to 9-Nov)</b>	Chapter 15
	13	14 Nov	Weathering and Mass Wasting; Exercise 14: Plastic in the Oceans – Lia Colabello	Chapters 17, 18 & 20
		16 Nov	Fluvial Processes and Landforms; Glacial Processes and Landform	Chapters 17 & 19
	14	<b>21-23 Nov</b>	<b>Thanksgiving Break</b>	
	15	28 & 30 Nov	Group Assignment Presentations; Course Review and Wrap –up/ Exam review	See assignment sheet
	16	5-Dec	<b>Exam 3 (Everything from 24-Oct to 30 Nov)</b>	