



Course ENVR/GEOG/GEOS 2302: The Global Environment
Term Spring 2017
Meetings Tuesdays & Thursdays 11:30 A.M. – 12:45 P.M., GR 3.402A & B

Instructor: Dr. Anthony Cummings
Office: GR 3.528
Office Hours: Tuesdays 1:00 – 3:00 P.M. or by appointment
Telephone: 972-883-4882
Email: anthony.cummings@utdallas.edu
Teaching Assistant: Ms. Yogita Karale, yyk160030@utdallas.edu, GR 3.318
Office Hours Wednesday 1:00 P.M. - 3:00 P.M. or by appointment.

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 and exercise 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**, 11th Edition, Pearson
2. Hammond. 2001. **Odyssey World Atlas** or **ANY WORLD ATLAS**.

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 last visited 1/9/2017.
*Students are not required to print materials available electronically.

COURSE POLICIES

Requirements:

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

and get your own notes. Lecture slides will also be uploaded to Blackboard (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 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 can complete all exercises and check for the correct answers with the instructor or 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 (2-3 persons) will research a topic assigned by the professor and present their findings to the class. An overview of the final project will be presented on the first day of class and topics will be available by 7 February in class and via 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. Food and beverages are not allowed in class.

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: <http://coursebook.utdallas.edu/syllabus-policies/>

PLACE LOCATIONS FOR EXAMS

Understanding where things are in the world will help you to gain perspective when we talk about some of these in class. You can get the Atlas listed in this outline, but there are also atlases in the library 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 EARTH	1	10-Jan	Introductions; Physical Geography	Chapter 1
		12-Jan	Structure of the Earth/ Exercise 1: Locations on Earth (Latitude & Longitude; Time zones)	Chapters 13 & 1
	2	17-Jan	Structure of the Earth/Exercise 2: Introduction to GIS (DEMs and TopoMaps)	Chapters 13 & 2
		19-Jan	Tectonism & Volcanism/ Exercise 3: Minerals and Rocks Quiz 1 (Materials from 10-Jan to 19-Jan)	Chapters 13 & 14
FROM ABOVE: THE ATMOSPHERE	3	24-Jan	Composition & Vertical Structure of the Atmosphere	Chapters 3
		26-Jan	Earth's Motion Relative to the Sun; Exercise 4: Earth - Sun Relations	Chapters 1 & 4
	4	31-Jan	Solar and Terrestrial Radiation/Review for Exam 1	Chapter 4
		2-Feb	Exam 1 (Materials from 10 - 31 Jan)	
	5	7-Feb	Global Energy Balance	Chapter 4
		9-Feb	Atmospheric Forces & Motion/Exercise 5: Air Pollution	Chapters 3 & 5
	6	14-Feb	General Circulation of the Atmosphere/Exercise 6: Tropical Cyclones	Chapter 5
		16-Feb	Atmosphere-Ocean Interactions/Exercise 7: El Niño; Quiz 2 (Materials from 7-Feb – 16-Feb)	Chapter 5
	7	22-Feb	Moisture in the Atmosphere/Exercise 8: Moisture and Humidity	Chapters 4 & 6
		23-Feb	Atmospheric Stability/Precipitation/ Exercise 9: Adiabatic Processes	Chapter 6
	8	28-Feb	Air Masses and Fronts; Midlatitude Cyclones	Chapter 7
		2-Mar	Clouds /Exercise 10: Weather Maps	Chapter 6
IN THE MIDDLE: AT THE EARTH'S SURFACE	9	7-Mar	Distribution of Climate Types/Exercise 11: Climographs and Climate Distribution/Review for Exam 2	Chapter 8
		9-Mar	Exam 2 (Materials from 7-Feb – 7 Mar)	
	10	13-18 Mar	SPRING BREAK - NO CLASSES	
	11	21-Mar	Climatic variability and its measurement	Chapter 8
		23-Mar	Biogeographic Processes – Vegetation Description, Influences and Distribution	Chapters 10 & 11
	12	28-Mar	Soil Profiles, Formation Factors and Distribution/ Exercise 12: Soils	Chapter 12
		30-Mar	Hydrology/Exercise 13: Flood Probability and Recurrence Intervals	Chapter 9
	13	4-Apr	Erosional Slopes and Processes	Chapter 15
		6-Apr	Geography of Energy/ Quiz 3 (Materials from 22-Mar – 5-Apr)	Chapter 13
	14	11-Apr	Weathering and Mass Wasting; Exercise 14: TBD	Chapter 15
		13-Apr	Fluvial Processes and Landforms	Chapters 16
	15	18-20 Apr	Group Assignment Presentations	See Term Project sheet
	16	25-Apr	Glacial Processes and Landforms /Course Review and Wrap –up/ Review for Exam 3	Chapters 19
		27-Apr	Exam 3 (Everything from 22-Mar to 26-Apr)	