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| **Course** | ENVR/GEOG/GEOS 2302: The Global Environment |
| **Term** | Spring 2019 |
| **Meetings** | Tuesday & Thursday 11:30 – 12:45 p.m., GR 3.402A & B |


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| **Instructor**: | **Dr. Anthony Cummings** |
| Office: | GR 3.528 |
| Office Hours: | Tuesdays 1:00 – 3:00 P.M. or by appointment |
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| **Teaching Assistant:** | **Ms. Yan-Ting Liau**, Yan-Ting.Liau@utdallas.edu, GR 3.414 |
| Office Hours | Monday 12:00 - 2:00 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 interactions between humans and the 'natural systems'.

**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 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**, 11th Edition, Pearson (any edition after the 9th should work).

**Recommended texts**:

2. Hammond. 2001. **Odyssey World Atlas, *ANY WORLD ATLAS or Google Earth***.
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 8/14/2018. *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 seven main areas: exams, quizzes, classroom participation and homework, a group project, in-class exercises, blog entries, and attendance.
**Exams and quizzes**: There are three exams and three 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 fifteen (15) exercises in this class distributed across the semester (please see academic organizer on page 4). To obtain the full credit for exercise portion of the course grade you are required to submit correct responses for ten (10) exercises. Exercises are issued in class and responses are due **one week** thereafter. The format for each exercise response will vary and will be announced in class along with the submission requirements, including whether submissions should be made via eLearning, hard copy or an oral presentation in class. **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 the instructional team. Questions on the content of exercises are likely to show up on exams and quizzes - so please ensure you understand them.
**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 the attendance grade will be deducted.
**Group project**: a small group (2-3 persons) will research a topic and present their findings to the class. Details on the final project will be presented as the class progresses and will be available via eLearning.
**Blog entries:** each student will make five (5) blog entries across the semester where they will share photographs or notes on them talking about the class with someone outside of the class, including their academic advisor (see details on the Blog description page) or relating the class and its contents to the daily life or profession/major.
**Make-up exams and re-grades**: 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. In the event a student submits incorrect responses to an exercise, they will be given an opportunity to correct same for a re-grade.
**Late work**: Late submission of work will be penalized 10 % per day.

Grade breakdown and criteria:

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| Exams (3 @ 15 % each) | 45% |
| One group project | 15 % |
| Quizzes (3 @ 5 % each) | 15 % |
| Exercises (10 @ 1% each) | 10 % |
| Participation and homework | 5 % |
| Attendance | 5 % |
| Blog entries (5 @ 1% each) | 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 at the following link constitutes the University's policies and procedures segment of the course syllabus: http://go.utdallas.edu/syllabus-policies. Please review these policies.

## 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: SOLID EARTH** | 1 | 15-Jan | Introductions | |
| | | 17-Jan | Physical Geography/ Exercise 1: Locations on Earth (Latitude & Longitude; Time zones) | Chapters 13 & 1 |
| | 2 | 22-Jan | Structure of the Earth/Exercise 2: Overview of GIS and TopoMaps | Chapters 2 & 13 |
| | | 24-Jan | Tectonism & Volcanism/ Exercise 3: Minerals and Rocks | Chapters 13 & 14 |
| **FROM ABOVE: THE ATMOSPHERE** | 3 | 29-Jan | Composition & Vertical Structure of the Atmosphere | Chapters 3 |
| | | 31-Jan | Earth's Motion Relative to the Sun; Solar and Terrestrial Radiation I/ Exercise 4: Earth - Sun Relations **Quiz 1 (Materials from 15 Jan -31 Jan)** | Chapters 1 & 4 |
| | 4 | 5-Feb | Solar and Terrestrial Radiation II/Review for Exam 1 | Chapter 2 |
| | | 7-Feb | **Exam 1 (Materials from 15 Jan - 5 Feb)** | |
| | 5 | 12-Feb | Global Energy Balance | Chapter 4 |
| | | 14-Feb | Atmospheric Forces & Motion/Exercise 5: Air Pollution | Chapters 3 & 5 |
| | 6 | 19-Feb | General Circulation of the Atmosphere/Exercise 6: Tropical Cyclones | Chapter 5 |
| | | 21-Feb | Atmosphere-Ocean Interactions/Exercise 7: El Niño**; Quiz 2 (Materials from 12-Feb – 21-Feb)** | Chapter 5 |
| | 7 | 26-Feb | Moisture in the Atmosphere**/**Exercise 8: Moisture and Humidity | Chapters 4 & 6 |
| | | 28-Feb | Atmospheric Stability/Precipitation/ Exercise 9: Adiabatic Processes | Chapter 6 |
| | 8 | 5-Mar | Air Masses and Fronts; Midlatitude Cyclones/ Clouds/Exercise 10: Weather Maps | Chapter 7 |
| | | 7-Mar | Distribution of Climate Types/Exercise 11: Climographs and Climate Distribution/Review for Exam 2 | Chapters 6 & 8 |
| **IN THE MIDDLE: AT THE EARTH'S SURFACE** | 9 | 12-Mar | **Exam 2 (Materials from 12-Feb – 7 Mar)** | |
| | | 14-Mar | Exercise 12: Fossil Fuels and Climate | |
| | 10 | **19-21 Mar** | **SPRING BREAK - NO CLASSES** | |
| | 11 | 26-Mar | Climatic variability and its measurement | Chapter 10 |
| | | 28-Mar | Biogeographic Processes – Vegetation Description, Influences and Distribution | Chapters 9 & 12 |
| | 12 | 2-Apr | Soil Profiles, Formation Factors and Distribution/ Exercise 13: Soils | Chapter 15 |
| | | 4-Apr | Hydrology/Exercise 14: Flood Probability and Recurrence Intervals | Chapters 17, 18 & 20 |
| | 13 | 9-Apr | Erosional Slope Processes and Forms | Chapter 15 |
| | | 11-Apr | Weathering and Mast Wasting/**Quiz 3 (Materials from 14-Mar – 11-Apr)** | Chapters 15 & 16 |
| | 14 | 16-Apr | Exercise 15: Geography of Energy | |
| | | 18-Apr | Fluvial Processes and Landforms | Chapters 17 - 20 |
| | 15 | 23-25 Apr | Group Assignment Presentations | See Term Project sheet |
| | 16 | 30-Apr | Glacial Processes and Landforms /Course Review and Wrap –up/ Review for Exam 3 | Chapters 17 & 19 |
| | | 2-May | **Exam 3 (Everything from 14-Mar to 30-Apr)** | |