Geography of Environmental Systems

Geography 201: ESJ 0202, Tuesday and Thursday 9:30 to 10:45 am

Spring 2017

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Virtual Office Hours:	Wednesday 12pm-2pm (Canvas Chat)	Monday 6pm – 8pm (Canvas Chat)
In Person Office Hours:	Wednesday 12 noon - 2pm	Monday 10am -12 noon

Course Text

We are using *Elemental Geosystems*, 8th Edition, 2016, by Christopherson and Birkeland.

PLEASED BE ADVISED THAT MORE INFORMATION WILL BE PROVIDED VERY SHORTLY FOR THIS.

Course Background

Geography 201 is an introduction to physical geography, a natural science allied with sciences such as geology, climatology, meteorology, oceanography, hydrology botany and agronomy. The geographic perspective is unique in that it integrates not only the individual systems that have commonly been associated with a single discipline, but also the interaction of these systems within a framework we call *Earth System Science*. The major goal of this class is to provide a fundamental understanding of the physical environment we live in. In doing so, the course will provide the basis for comprehending modern environmental issues, including those affected by human activities.

Learning Outcomes

1. To understand the fundamental laws and principles underlying the physical environment, how these control processes that occur on the land surface, in the oceans and in the atmosphere, and how these systems interact.

2. To understand the mechanisms that lead to variability in important physical characteristics such as air temperature, weather, climate, landforms, soils, plants and other elements of the environment

3. To develop a basic understanding of the geographic perspective as applied to earth system science.

4. To develop the foundational learning of environmental science and the scientific method that enables critical thinking about the many pressing environmental problems facing society in the coming decades.

Knowledge Objectives

At the completion of our course, we should be able to describe the basic elements of physical geography, including the following:

1. The Earth's revolution around the Sun and its impact on energy, temperature, and seasons.
2. The Earth's global energy balance and its variability by latitude and seasons
3. The factors that control air temperature and its variability, and the science behind global warming.
4. The role of water in the atmosphere and its importance in the hydrologic cycle.
5. The formation of clouds, weather systems and severe storms.
6. The formation winds, from local to global scales, and the impact of air pressure and coriolis force on these.
7. How the climates of the Earth are classified.
8. The processes that control the rock cycle and plate tectonics.
9. The formation of landforms, including volcanoes, tectonic features, and earthquakes.
10. The processes that reduce landforms, including weathering and mass wasting, and those which shape them through running water, wind and ice.
11. The formation, classification and geographic distribution of soils.
12. The fundamental biogeographic processes and how these shape the global distribution of plants and animals.
13. Specific knowledge of current environmental issues including global warming, sea-level rise, impacts of severe storms, air-pollution, water pollution, soil degradation, and loss of biodiversity, and the key processes in physical geography that underlay them.

Course Organization
The course is organized around the four basics systems of the Earth: the energy-atmosphere system, the hydrosphere, the lithosphere and the biosphere. We will follow the general outline of book and cover each chapter in sequence. Lectures will highlight key concepts in our text as well as a number of special topics. We will also present some material that is not in the text.

Geography 201 is a *Mastered* course using the content of Pearson's MyLab and Modified Mastering (abbreviated as ML&M) available via Canvas. We will experiment with various aspects of ML&M during the semester. The ML&M site has various learning components, including self-tests, adaptive learning, videos and other media. In addition, graded online quizzes will be assigned in ML&M.

The course will be taught using graphics and notes in PowerPoint, as well as notes written by hand during lecture. The PowerPoint slides will be made available on Canvas, but not the hand-written notes. These materials and all lecture notes taken during class are copyrighted by the University and may not be reproduced or disseminated without the written permission of the instructor. In addition, no audio taping of lectures is allowed without the written permission of the instructor.

Course Requirements
There is no explicit attendance requirement for our course. However, there will be short, in-class writing assignments and assessments that will occur without prior notice and which are graded either for content or completion. Students are required to read each chapter and complete a graded, end of chapter reading quiz (graded online) before lecture on ML&M. We will have two midterms and a comprehensive final exam, but the the final will be weighted towards the material not covered on the first two midterms.

We want to stress again that it is important to read the assigned material, as given in the syllabus, before the material is covered in lecture, and complete the reading quiz. After lecture it is recommended to review material on ML&M using the various learning options. This will greatly aid your understanding and retention. A word of warning: this class moves *very* fast. The material is extremely interesting and not particularly difficult; but there is a lot of it. Whatever you do, do not get behind in the reading and do not defer your understanding of the concepts covered in class until exam time.

Course Grading
Course grades will be determined as the sum of the weighted scores of any in-class assessments, assigned work on ML&M, the two midterms and final. Exams generally consist of short answer diagram and multiple choice questions. Grades are assigned as follows:

Final Percentage	Grade
96-100	A+
92-95	A
90-91	A-
88-89	B+
82-87	B
80-81	B-

78-79	C+
72-77	C
70-71	C-
60-69	D
Less than 60	Fail

Final Grade Components

ML&M Reading Quizzes	15%
Midterm #1	25%
Midterm #2	25%
Final Examination	35%

CORE Laboratory Science Requirement

Geography 201, when taken concurrently with Geography 211, fulfills the CORE Laboratory Science Requirement. Geography 201/211 ***must*** be taken in the same semester to meet this requirement. Geography 201 by itself does ***not*** count as a non-lab science for CORE.

Academic Integrity

The University of Maryland, College Park has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. **Please note well:** Each student must complete their own online Mastering work, by themselves. Unless specifically directed, working collaboratively on the ML&M graded components is a violation of academic integrity and will be treated very seriously (possibly resulting in a grade of "XF"). For more information on the Code of Academic Integrity and the Student Honor Council, please visit the Student Honor Council website to see Code of Academic Integrity.

Absences

The most effective way to learn the material in this course is to attend *every* lecture. It is the policy of the University to excuse the absences of students that result from the following causes: illness of the student, or illness of a dependent as defined by Board of Regents policy on family and medical leave; religious observance (where the nature of the observance prevents the student from being present during the class period); participation in university activities at the request of University authorities; and compelling circumstance beyond the student's control. Students claiming excused absence *must apply in writing and furnish documentary support for their assertion that absence resulted from one of these causes*. It is the student's responsibility to inform the instructor of any intended absences ***before*** they occur for religious observance or university activities. If you must miss class because of medical reasons, the following policies apply:

A. For every medically necessary absence from class, a reasonable effort should be made to notify the instructor in advance of the class. When returning to class, students must bring a note identifying the date of and reason for the absence, and acknowledging that the information in the note is accurate.

B. If a student is absent more than two (2) times, the instructor may require documentation signed by a health care professional.

C. If a student is absent on days when a midterm or final is scheduled, he or she is *required* to notify the instructor in advance, and upon returning to class, *bring documentation of the illness, signed by a health care professional*. If a student misses an in-class short assessment, which have no prior notice, the student will not be able to give advance notification. Upon return to class the student must bring a note identifying the date of and reason for the absence, and acknowledging that the information in the note is accurate. After the first such absence, the student is required to bring documentation of the illness, signed by a health care professional. If they fail to do so, they will receive a zero for the assessment.

Policy on Make-up and Early Exams

Students with documented absences are required to take a make-up exam as soon as possible, but no later than within one week of returning to classes. The documentation must specify the dates for which the absences are excused. The instructors in general cannot accommodate early exams. In particular note well that ***no*** early exams will be given for the second midterm which occurs on the Tuesday of Thanksgiving week. There are no make-ups for the in-class assessments unless you have proper documentation.

Policy on Electronic Devices and General Lecture Behavior

Until further notice is given no use of any electronic device (phone, PDA, tablet, laptop) is allowed in class. As the course progresses we may initiate in class learning using student response via an electronic device and using ML&M. Student will receive notice of this change.

Students are expected to be considerate of their fellow classmates and the instructors during lecture. This includes no talking, no reading of newspapers, or other distracting behavior. If you arrive late for class, please enter the classroom by the rear lecture room doors. If you must use the washroom during lecture please enter and exit by the rear doors.

Class Schedule

Dates	Topic	Readings
Jan 26	Essentials of Geography	Chapter 1
PART I: The Energy-Atmosphere System		
Aug 31	Solar Energy, Seasons and Atmosphere	Chapter 2
Sep 5, 7	Atmospheric Energy and Global Temperatures	Chapter 3
Sept 12, 14	Atmospheric and Oceanic Circulations	Chapter 4
PART II: Weather, Water and Climate Systems		
Sept 19, 21, 26	Atmospheric Water and Weather	Chapter 5
Sept 28, Oct 3, 5	Water Resources	Chapter 6
Oct 10	*First Midterm Exam*	Chapters 1-6
Oct 12	Earth's Climatic Regions and Climate Change	Chapters 7, 8
PART III: Landforms and Geomorphology		
Oct 17, 19	The Dynamic Planet	Chapter 9
Oct 24, 26	Tectonics, Earthquakes and Volcanism	Chapter 10
Oct 31	Weathering, Karst Landscapes and Mass Movement	Chapter 11
Nov 2, 7	River Systems	Chapter 12
Nov 9	*Second Midterm Exam*	Chapter 7-12
Nov 14, 16	Oceans, Coastal Systems and Wind Processes	Chapter 13
Nov 21	Glacial and Periglacial Landscapes	Chapter 14
PART IV: Ecosystem Processes		
Nov 28, 30	The Geography of Soils	Chapter 15
Dec 5	Ecosystem Essentials	Chapter 16
Dec 7	Terrestrial Biomes	Chapter 17
Thursday Dec. 14 8:00 – 10:00 am	*Final Exam*	Chapters 1-17

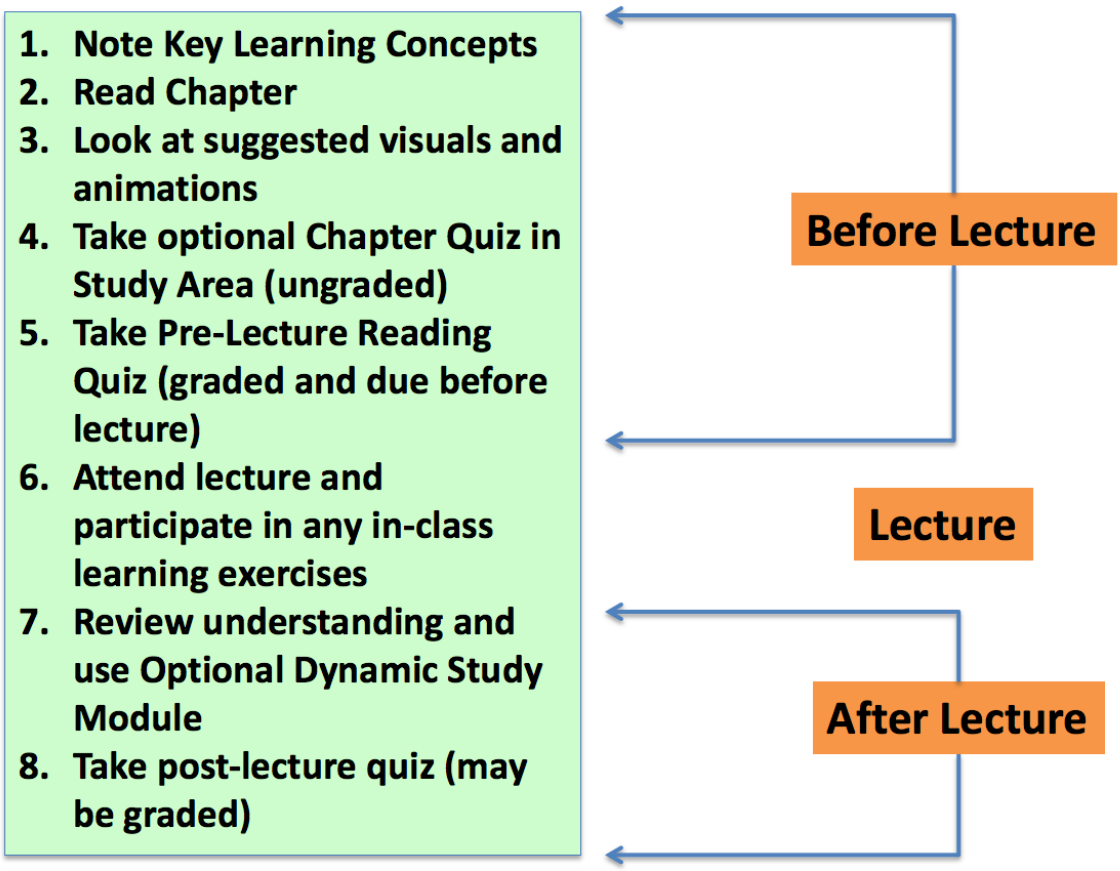
Important Dates

First Midterm Examination: Tuesday October 10th
Second Midterm Examination: Thursday November 9th
Final Examination: Thursday December 14th

MyLab and Modified Mastering

Please follow the directions on the following page below to access ML&M through Canvas.

We have a provided a suggested workflow to help guide you through using ML&M.



Before Lecture:
Before you start reading the chapter, first note the Key Learning Concepts as they will help guide your reading. Next, read the chapter and look at any suggested visuals, animations and other media on ML&M. If desired, take the ungraded chapter quiz (note this is *not* the same as the graded reading quiz). Take the graded Pre-Lecture Reading Quiz before the due date (which is always before lecture).

During Lecture:
Attend lecture, and participate in any in-class learning exercises. Take notes on any new material that is provided in class, as well as noting any concepts that are not clear.

After Lecture:
Review your understanding (clear up any questions from class or readings), and consider using the adaptive learning Dynamic Study Material (these are never graded). Finally, take the post-lecture quiz if provided (which may be graded).

Dynamic Study Modules can be accessed using the "Study Area" tab in your MyLab and Mastering area of Canvas. All practice quizzes, videos and additional materials are available from there. The modules are assigned based on the corresponding chapter in the book.

Dynamic Study Module Schedule (Optional):

Module	Topic	Readings
Module 1	Essentials of Geography	Chapter 1
PART I: The Energy-Atmosphere System		
Module 2	Solar Energy, Seasons and Atmosphere	Chapter 2
Module 3	Energy Balance and Temperature	Chapter 3
Module 4	Atmospheric and Oceanic Circulation	Chapter 4
PART II: Weather, Water and Climate Systems		
Module 5	Atmospheric Water and Weather	Chapter 5
Module 6	The Hydrologic Cycle and Water Resources	Chapter 6
Module 7 and 8	Climate and Climate Change	Chapters 7, 8
PART III: Landforms and Geomorphology		
Module 9	Earth Structure and Plate Tectonics	Chapter 9
Module 10	Volcanic and Tectonic Landforms	Chapter 10
Module 11	Weathering and Mass Wasting	Chapter 11
Module 12	River Systems and Landforms	Chapter 12
Module 13	Landforms Made by Waves and Wind	Chapter 13
Module 14	Glacial and Periglacial Landforms	Chapter 14
PART IV: Ecosystem Processes		
Module 15	Soils	Chapter 15
Module 16	Biogeographic Processes	Chapter 16
Module 17	Global Biogeography	Chapter 17

Pearson

Student Registration Instructions
MyLab & Modified Mastering with Canvas

MasteringGeography®

Enter your Canvas course

1. Sign in to Canvas and enter your Canvas course.
2. Do one of the following:
   - Select any Pearson link from any module.
   - Select **MyLab & Mastering** in the Course Navigation, and then select any course link on the Pearson page.

Get access to your Pearson course content

1. Enter your Pearson account **username** and **password** to **Link Accounts.**
   You have an account if you have ever used a Pearson MyLab & Mastering product, such as MyMathLab, MyITLab, MySpanishLab, MasteringBiology or MasteringPhysics.
   - If you don't have a Pearson account, select **Create** and follow the instructions.
2. Select an access option:
   - Enter the access code that came with your textbook or was purchased separately from the bookstore.
   - Buy access using a credit card or PayPal account.
   - If available, get temporary access by selecting the link near the bottom of the page.
3. From the You're Done page, select **Go to My Courses.**

Note: We recommend you always enter your MyLab & Modified Mastering course through Canvas.

Get your computer ready

For the best experience, check the system requirements for your product at:
http://www.pearsonmylabandmastering.com/system-requirements/

Need help?

For help with MyLab & Modified Mastering with Canvas, go to:
http://help.pearsoncmg.com/mylabmastering/canvas/student/en/index.html

Please note. Always enter the ML&M content through Canvas, as opposed to going directly through.

PLEASE BE ADVISED THAT THE MATERIAL OUTLINED IN THE SYLLABUS, INCLUDING DATES FOR EXAMS ARE SUBJECT TO CHANGE IN ACCORDANCE WITH THE OCCURRENCE OF SPECIAL CASES AND EVENTS.