



WORCESTER S T A T E UNIVERSITY

SYLLABUS Physical Geography (GS101-01) Spring 2016 TuTh 10:00 am; ST318

Professor: Dr. Allison Dunn
Office Hours: Tuesdays 1-2:30, Wednesdays 11-12:30, or by appointment
Contact: adunn@worcester.edu / 929-8641 / ST310N

Required Text: Geosystems, 9th edition, by Robert Christopherson

Description

This is a course introducing physical geography, which examines the processes and features that make up the Earth. We will study the four major Earth systems: the atmosphere, the hydrosphere, the lithosphere, and the biosphere. We will use the tools used by physical geographers to understand and analyze Earth systems. We also investigate the human impact on Earth and its processes.

Learning Outcomes

- Identify earth's four spheres (atmosphere, hydrosphere, biosphere, and lithosphere) and describe their interactions
- Recognize that the earth's surface is dynamic and is influenced by running water, wind, waves, glaciers, and other processes.
- Read and interpret maps, including topographic, climate, and hazard, and assess how they interface with the human environment
- Understand the methods by which maps are created, including a comprehension of the need for map projections, sources of spatial and attribute data used in the creation of maps, and techniques used in the collection, display, and storage of spatial data.
- Explain how the earth-sun relationship drives seasons, climate, and atmospheric motions
- Describe how human understanding of the forces shaping the earth has evolved over time
- Recognize the inherent uncertainty in assessing past and future climate trends, and how to reconcile this uncertainty to draw reasonable conclusions.
- Assess the ways human activities have changed the earth's four spheres, and how this has impacted the natural environment
- Recognize the human-environment relationship in terms of humans as modifiers of environment and impacts of natural phenomena on humans

Grading:

Non-honors sections

Exams (2 total): 25%
Final Exam: 20%
Assignments: 30%
Weekly news articles: 10%
Class participation: 15%

Honors sections

Exams (2 total): 20%
Final Exam: 20%
Assignments: 20%
Weekly news articles: 10%
Class participation: 10%
Honors reports: 10%
Final presentation: 10%

Exams

There are two exams over the course of the semester, as well as a final exam. The final exam will cover material from the entire semester, though material since the second exam will be emphasized. There will be **NO make-up exams** given. Exam dates are listed on the schedule; **do not** schedule appointments or travel on these dates.

Assignments

There are assignments throughout the semester in order to practice the concepts covered in class. You are encouraged to work with your classmates on the assignments, **and may submit one assignment per group of up to three students.** Assignments are distributed in class and via Blackboard; you are responsible for the assignment even if you are absent on the date it is distributed. Late work is penalized by 10% for each class meeting it is late.

Weekly News Articles

By 9:00 am each Thursday, you will submit, via Blackboard, a link to a news article relevant to physical geography. The syllabus and the textbook can give you a sense of what topics qualify. Along with the link to the article, you will submit a brief, two-paragraph response to the article. The first paragraph is a 3-4 sentence synopsis of the article, summarizing the scientific findings presented with no opinion interjected. The second paragraph is a 2-3 sentence blog-style entry allowing you to respond to the article with your opinion, any questions raised by the article, etc. **The article must be submitted by 9am, before class** on Thursday. You will have the opportunity to present your article to the class on Thursday for class discussion. Articles are graded on a v+/v/v- basis and your lowest article grade will be dropped.

Class participation

15% of your grade depends on your class participation. Classroom participation includes active engagement in lectures and class activities, quizzes (announced or unannounced), arriving on time, demonstrable listening, and behavior appropriate to creating a supportive college atmosphere (no phone or computer use, no texting) **Phones and computers are to be turned off for class.** Missing more than three classes will negatively impact your participation grade. **Failure to meet these expectations will negatively impact your participation grade.**

Academic Honesty

WSU expects students to maintain standards of honesty and integrity in all aspects of their academic careers. Academic dishonesty violates the very nature of our academy. It includes, but is not limited to submitting, copying, or substantially restating the work of another person or persons in an oral or written work without citing the appropriate source; collaborating with someone else in an academic endeavor without acknowledging that contribution; and copying the answers of another student in an examination. The official policies and procedures of the University's response to academic dishonesty are outlined in the Student Handbook, available at <https://www.worcester.edu/Student-Handbook/>. Students violating this policy will **fail** the course.

Academic Support & Tutoring

Students who think they may need academic assistance in order to achieve their educational objectives should visit the Academic Success Center as soon as possible to maximize the benefit of the service. Academic advising services and tutoring services are available. Contact Academic Success at x8111 Office: A-130

Counseling

Students experiencing stress related to personal or school-related problems are encouraged to speak with a counselor. Contact Counseling Services at x8072 Office: SC-300

Americans with Disabilities Act

Worcester State University is committed to the full participation of all students, and will provide accommodations for any student with documented disabilities. Students must register with the Disability Services Office. Please contact the instructor as early as possible to discuss necessary accommodations. All information regarding disabilities will be treated with confidentiality. For more information please contact the Disability Services Office, x8733, Fran Manocchio, Director. Office: A-131

Class Schedule

Date	Concept	Reading Due	Work Due via Blackboard (additional work may also be due)
Jan 19	Introduction, the Earth system		
Jan 21	How to write a news article, scientific method, maps	Chapter 1	
Jan 26	<i>Using maps</i>		
Jan 28	The Earth-Sun system	Chapter 2	Article 1
Feb 2	Earth's atmosphere	Chapter 3	
Feb 4	Energy, space, effective temperature, and the atmosphere		Article 2, Honors place selection
Feb 9	Greenhouse gases	Chapter 4	
Feb 11	Earth's radiation balance, climate change	Chapter 11	Article 3
Feb 16	Climate change		
Feb 18	Exam 1 (Chapters 1-4, 11)		Honors Report 1
Feb 23	Circulation in the atmosphere	Chapter 6	
Feb 25	What If? Volcanoes and climate		Article 4
Mar 1	Water in the atmosphere	Chapter 7	
Mar 3	Clouds, <i>Measuring humidity and dew point</i>		Article 5
Mar 8	Air masses, fronts, and weather	Chapter 8	
Mar 10	<i>Investigating weather</i>		Article 6
Mar 15	Groundwater resources	Chapter 9	
Mar 17	Investigating groundwater		Article 7; Honors Report 2
Spring Break: March 21-25			
Mar 29	Exam 2 (Chapters 5-9)		
Mar 31	The solid earth and geologic time	Chapter 12	Article 8
Apr 5	<i>Discovering Plate Boundaries</i>	Chapter 13	
Apr 7	Volcanoes, earthquakes, and tsunamis		Article 9
Apr 12	River systems	Chapter 15	Honors Report 3
Apr 14	River landforms and flooding		Article 10
Apr 19 Apr 21	Prof. Dunn will be away at a conference; alternative assignments and readings TBA		
Apr 26	Glaciers and ice ages	Chapter 17	Honors Report 4
Apr 28	Ecosystems and Biomes	Chapter 19	Article 11
May 3	Interactions between spheres, Honors Presentations		
May 10	8:30 am Final Exam		

Honors Section – Physical Geography

Honors students will focus their semester's learning by preparing a study on the physical geography of a place. At the beginning of the course, you will choose a place for your study. The place can be a specific city (like Worcester) or a larger geographical area (examples: Madagascar, the Sahara, etc.) During the semester, you will write periodic one-page reports relating the topics covered in class to your place of study. *If your chosen place is small (like a city), your report may include the surrounding area, which should make it easier to find information.* At the end of the semester, you will synthesize all the reports, including an introduction, conclusion, and bibliography, into a short presentation. This presentation will be given on the last day of class.

Place selection: **due Thursday, February 4** via Blackboard. Reports are due for the following topics:

Report	Assignment
1	<p>Chapter 11: Climate change. Your report should include answers to the following questions:</p> <ul style="list-style-type: none"> • Has climate changed at your place in the past century? • How is it expected to change in the future? • What are some predicted consequences of climate change in your area? <p>Resources:</p> <ul style="list-style-type: none"> • If you are studying a location in the United States, the document “Our Changing Planet” has very detailed US-specific information and can be found at http://downloads.globalchange.gov/ocp/ocp2016/Our-Changing-Planet_FY-2016_full.pdf. • The most recent IPCC report can be found at http://ipcc.ch/publications_and_data/ar4/wg1/en/contents.html and details past climate change and predictions for the future. In particular, you may wish to consult Chapter 11 (http://ipcc.ch/publications_and_data/ar4/wg1/en/ch11.html) for predictions specific to your place.
2	<p>Chapter 5: Global Temperatures. Your report should answer the following questions:</p> <ul style="list-style-type: none"> • What is the average annual temperature pattern at your place? • What factors contribute to this observed pattern?
3	<p>Chapters 12-13: The Dynamic Planet / Tectonics, Earthquakes, and Volcanism. Your report should answer the following questions:</p> <ul style="list-style-type: none"> • What tectonic processes shaped your place, either in the past or the present? • How does its landscape reflect these processes? Does it face any tectonic, seismic, or volcanic risks?
4	<p>Chapter 15: River Systems and Landforms. Your report should answer the following questions:</p> <ul style="list-style-type: none"> • What are the major river(s) in your place? • How have these waterways affected the landscape? • Have these rivers had a prominent role in the development of the area?

Report guidelines: You can see an example Honors Report on Blackboard, under the “Honors” link.

- Your report should be submitted via Blackboard and follow the Place Study Template, found on Blackboard.
- Each report's text (not including references) must be between 200-500 words in length.
- Your report should have **two** accompanying graphics (photographs, graphs, etc.) to illustrate your points.
- **All** sources must be cited (see Example Place Study report online.) You may not copy phrases, sentences, paragraphs, or graphics in written work from ANY source without quotes and specific attribution. Unattributed copying will result in a 0 grade (see Academic Honesty section in syllabus.) Your submission will be analyzed via SafeAssign and your originality score will be available to both you and the instructor.
- Report rubric:
 - 4 points – content: how well does your text address the questions asked?
 - 2 points – accompanying graphics: are they appropriate and do they enhance your discussion
 - 2 points – grammar and clarity
 - 2 points – correct citations and attribution