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GPHY 112N.R00: Introduction to Physical Geography Laboratory

David D. Shively

University of Montana, Missoula, david.shively@umontana.edu

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Course Syllabus - GPHY 112 Intro to Physical Geography Lab Spring 2021

Instructor Information

Instructor: David Shively, Professor

Department of Geography, UM

Email: david.shively@umontana.edu

Phone: 406-243-6478

Office: Remote – email instructor with questions or attend a Zoom appointment (see below)

Zoom Office Hours:

- T & R 1:00-2:00 PM;
 - Zoom: <https://umontana.zoom.us/j/99679988996?pwd=cWR4UDFoR0lFKzVyaFdzVUJPRFN0dz09>
- W 3:00-4:00 PM;
 - Zoom: <https://umontana.zoom.us/j/91477652024?pwd=OU10WHBXTmt5SzVUcGsvS1JqNzZIQT09>
- by Appt. (Contact instructor to schedule)

Teaching Assistant: Christina Leas

Email: christina.leas@umontana.edu

Office: TBA

Zoom Office Hours: TBA

Essential Information for this Remote Course

- Meeting Days & Times
 - **Wednesday, and Friday 1:00 – 2:50 PM**
- **Zoom:**
<https://umontana.zoom.us/j/99737648150?pwd=MTkzNDJsVmhvem45UTJyTUhySnBoZz09>
- For the Wednesday and Friday Labs, for which you registered for separately, I've created one recurring **Zoom** meeting (same link for each) and one **Moodle** site. You can attend the session that best fits your schedule for any week, and are encouraged to attend both lab sessions if you wish.
- This course is taught in “**Synchronous Mode**”, meaning that you must attend and participate in each class session via **Zoom**. Shively has set up and sent **invitations** to the recurring Zoom meetings (here is the link in case you need it). The invitations can be added directly to your UM Outlook Calendar.

UM's Mansfield Library has laptops for students to check out, but supplies are limited. Students can call (406) 243-4071 or email library.circ@mso.umt.edu to learn how to request a laptop. Also, UM IT is working to provide a limited number of mobile hotspots to students.

Course description:

Catalog:

GPHY 112N - Intro to Phys Geography Lab. 1 Credit.

Offered autumn and spring. Prereq. or coreq., GPHY 111N. Introduction to concepts and techniques needed to understand and analyze the information contained in various types of maps, graphs, aerial photos, imagery, and other graphics and geographic data sets. This is prerequisite to GPHY 385. Gen Ed Attributes: Natural Science Lab Course (N)

Expanded Course Description

This course introduces physical geography: the study of the Earth's natural environments. You will learn about the principles and mechanisms of climate and weather, landforms and earth surface processes, and soils, vegetation, and ecosystems at global and regional scales. Throughout the course we use specific regional examples to illustrate and understand global processes. You will also learn about scientific methods as utilized in the subdiscipline of physical geography and the mapping of physical phenomena. We will give attention to global environmental problems such as "greenhouse" warming and climatic change, the stratospheric ozone layer, the El Niño/La Niña oceanic-atmospheric circulation pattern, tropical storms and other extreme weather events, and the nature and distribution of volcanoes and earthquakes. The course is designed to be both challenging and interesting. It provides essential background for further study in meteorology, climatology, hydrology, ecology, biogeography, geology and physical geography.

Learning Outcomes:

General Education Learning Outcomes:

Upon completion of a Natural Science course, a student will be able to:

- understand the general principles associated with the discipline(s) studied;
- understand the methodology and activities scientists use to gather, validate and interpret data related to natural processes;
- detect patterns, draw conclusions, develop conjectures and hypotheses, and test them by appropriate means and experiments;
- understand how scientific laws and theories are verified by quantitative measurement, scientific observation, and logical/critical reasoning;
- and understand the means by which analytic uncertainty is quantified and expressed in the natural sciences.

Course Specific Learning Outcomes:

Upon successful completion of the course, you should be able to:

- define basic terminology used to describe physical processes and landscape forms both quantitatively and qualitatively;
- describe the main factors that influence spatial variation in weather and climate processes;
- demonstrate spatial understanding by using maps and other geographical representations to acquire, process, and report information from a spatial perspective;
- describe the spatial distribution of landscapes, relate these differences to variations in weather and climate, and reflect on how the variation impacts people.

Textbook and supplementary materials:

Suggested Lab Manual

GEOS: The Pearson Custom Library for Geography & Geology

Course Requirements

Attendance

Attendance is mandatory. Overall attendance will be worth the equivalent of one lab grade (20 points) which may be important to maximizing your grade in the course. If you know that you are going to miss a class for an excused reason, please let the instructor know in advance. You must provide proper documentation for the absence. Attendance will be recorded each week. It is important that you attend class to obtain valuable information to help you pass the course.

Class Procedures

You will work on a lab exercise each week. Following the instructions is crucial to completing your lab correctly. At the start of each lab, the instructor will give a brief lecture relevant to the lab and/or complete some example problems.

Weekly labs will be generally based on the schedule of topics and lectures corresponding to material covered in the GPHY 111 Intro to Physical Geography lecture course. This is not a solid schedule, and it is subject to change.

Grading

Your final grade will consist of points from your lab exercises (220 pts) and attendance points (20 pts). There are no quizzes, tests, or final exams in this course. Each lab is worth 20 points, and there are 12 labs. We will drop your lowest lab grade, so the course is worth 240 points including the attendance credit. The lab exercises are generally due at noon (12:00 PM) of the following lab session (see instructions on each lab for actual due date). For every day that a lab assignment is late, 5% will be deducted from the total points earned. Anything turned in after the designated due date (at noon) will be considered late. We encourage you to complete as much of the assignments as possible during lab, as this will be the most beneficial use of your time.

Provisional Course Schedule*

Week	Topic
1	Review Syllabus and Lab Organization
2	Lab 1: Coordinate Systems, Map Projections, Scale and Time
3	Lab 2: Earth, Sun, Insolation, Temperature Concepts
4	Lab 3: Atmospheric Pressure, Wind, & Global Circulation; Atmospheric Moisture & Precipitation
5	Lab 4: Weather Maps
6	Lab 5: Global Climates and Climate Change
7	Lab 6: Global Biomes and Soils
8	Lab 7: Ecosystems and Ecoregions

Week	Topic
9	Lab 8: Plate Tectonics, Global Patterns & Volcanism
10	Lab 9: Weathering & Mass Movements
11	Lab 10: Recurrence Intervals for Natural Events & Fluvial Geomorphology
12	Lab 11: Glacial, Arid, Coastal Landforms
13	Lab 11 Continued
14	Lab 11 Continued
15	Wrapping Up

*Provisional nature of course schedule indicates that though every attempt will be made to adhere to this schedule, it is not written in stone. Any impact of deviations from the schedule on course activities will be considered and adjusted for.

Other Course guidelines and policies:

Cultural or ceremonial leave allows excused absences for cultural, religious, and ceremonial purposes to meet the student’s customs and traditions or to participate in related activities. To receive an authorized absence for a cultural, religious or ceremonial event the student or their advisor (proxy) must submit a formal written request to the instructor. This must include a brief description (with inclusive dates) of the cultural event or ceremony and the importance of the student’s attendance or participation. Authorization for the absence is subject to approval by the instructor. Appeals may be made to the Chair, Dean or Provost. The excused absence or leave may not exceed five academic calendar days (not including weekends or holidays). Students remain responsible for completion or make-up of assignments as defined in the syllabus, at the discretion of the instructor.

Instructors ***shall excuse*** absences for reasons of military service or mandatory public service.

It is extremely disruptive to have students arrive late and/or leave early. I know that you have nothing else on your schedule during the class period, therefore your presence throughout the entire class period is expected. Not only will this keep me happy, it will help you to master the material.

Late Work

Late work will lose one-half a letter grade (i.e., A to A-) for each day late including weekends. Work is due at the start of class on day specified. Please do not make excuses for late work – I will need advance notification of any factors that will affect your ability to turn in work on time and/or to meet other course requirements. Save, back-up, and be prepared to submit digital (i.e., on disk) copies of any work produced during the semester in case of technology failures.

Academic Misconduct

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code.

Disabilities Accommodation

Students with disabilities may request reasonable modifications by contacting me. The University of Montana assures equal access to instruction for students with disabilities in collaboration with instructors and Disability Services for Students, which is located in Lommasson Center 154 (and see <https://www.umt.edu/dss/default.php>). The University does not permit fundamental alterations of academic standards or retroactive modifications.

Basic Needs Security

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact the Office of Student Success (<http://www.umt.edu/oss/>) for support. Also, connect with the UM Food Pantry (<http://www.umt.edu/asum/agencies/food-pantry/default.php>). Furthermore, please notify the professor if you are comfortable in doing so. This will enable them to assist and to exercise understanding and accommodation.

Recording in Class

Montana law requires that if you wish to record a lecture, you must first inform me and I must consent before you do so.

Grading policy

Though I will examine the distribution of course scores (totals) to ensure that it is an appropriate and fair one, I do not practice grading that contributes to “grade-inflation.” The best individual strategy to ensure that you receive a grade you can live with is to work to meet and/or exceed course requirements. Remember, A’s are rewards for Superior Performance, B’s for Above Average Performance, and C’s for Average Performance. Course grades will be based upon the following percentages of the total points possible for the course as weighted by the criteria specified in course requirements.

A	<93.0%	A-	= 90.0-92.9%		
B+	= 87.0-89.9%	B	= 83.0-86.9%	B-	= 80.0-82.9%
C+	= 77.0-79.9%	C	= 73.0-76.9%	C-	= 70.0-72.9%
D+	= 67.0-69.9%	D	= 63.0-66.9%	D-	= 60.0-62.9%
				F	< 59.9%

*Please note, this class is offered for traditional letter grade only, it is not offered under the credit/no credit option.