

University of Montana

## ScholarWorks at University of Montana

---

University of Montana Course Syllabi, 2021-2025

---

Spring 2-1-2021

### GPHY 111N.R01: Introduction to Physical Geography

David D. Shively

*University of Montana, Missoula*, [david.shively@umontana.edu](mailto:david.shively@umontana.edu)

Follow this and additional works at: <https://scholarworks.umt.edu/syllabi2021-2025>

**Let us know how access to this document benefits you.**

---

#### Recommended Citation

Shively, David D., "GPHY 111N.R01: Introduction to Physical Geography" (2021). *University of Montana Course Syllabi, 2021-2025*. 1208.

<https://scholarworks.umt.edu/syllabi2021-2025/1208>

This Syllabus is brought to you for free and open access by ScholarWorks at University of Montana. It has been accepted for inclusion in University of Montana Course Syllabi, 2021-2025 by an authorized administrator of ScholarWorks at University of Montana. For more information, please contact [scholarworks@mso.umt.edu](mailto:scholarworks@mso.umt.edu).

## Course Syllabus - GPHY 111 Introduction to Physical Geography Spring 2021

### Instructor Information

Instructor: David Shively, Professor

Department of Geography, UM

Email: [david.shively@umontana.edu](mailto: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](mailto:christina.leas@umontana.edu)

Office: TBA

Zoom Office Hours: TBA

### Essential Information for this Remote Course

- Meeting Days & Times
  - **Monday, Wednesday, and Friday 11:00 - 11:50 AM**
- **Zoom:**  
<https://umontana.zoom.us/j/94697398486?pwd=OVRqSHFZY3NBK3gxUzc2Vm1mTW9kZz09>
- 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](mailto: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 111 – Intro to Physical Geography. 3 Credits.

Offered autumn and spring. Introduction to the earth’s major natural environmental systems, their spatial distribution and interrelationships, including weather and climate, vegetation and ecosystems, soils, landforms, and earth-surface processes.

Gen Ed Attributes: Natural Science Course (N)

Accompanying Lab Course is GPHY 112N - Intro to Phys Geography Lab. 1 Credit. May be taken concurrently or separately. This lab course satisfies the General Education Natural Science Laboratory requirement.

### **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;
- 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 variations impact people.

### **Textbook and supplementary materials:**

- Arbogast, Alan F. 2017. *Discovering Physical Geography*. New York: Wiley.

*Your digital course materials are provided by the University of Montana Bookstore through Moodle at a discounted rate the bookstore has negotiated on your behalf. Your specially discounted price is included with your course fee, but you have the option to opt out of the*

*program to have that cost refunded to your student account. If for any reason you decide to purchase your materials elsewhere you can opt out of this program by the add/drop deadline on February 1st, 2021, 11:59PM MST and you will receive the refund later in the term.*

- For any questions about billing, please contact Amanda Peterson at [amanda.peterson@mso.umt.edu](mailto:amanda.peterson@mso.umt.edu).
- For any questions about using your eBook, please reference [RedShelf Solve](#).
- **Instructions for Accessing the text:**
  - Click the RedShelf link in your course’s module in Moodle.
  - Click View Course Materials.
  - Click Start Reading
- **To opt out:**
  - Click the RedShelf link in your course’s module in Moodle
  - Click View Course Materials
  - Scroll down to the gray opt-out button and follow the prompts.
- Additional notes concerning readings:
  - Other Selected readings are provided via the course Moodle page, and are indicated in the Provisional Course Schedule below.
  - Be sure to read assigned material prior to the class to which it pertains.
  - Additional items may be recommended as supplementary, or assigned, as appropriate during the semester.
  - As you read assigned works, make notes or annotations so that you can refer to these later during discussion or otherwise.

### Course Requirements

Activity	Percentage
Attendance/Daily Quizzes	15
Assignments	
1. The Geographic Grid and Mapping Concepts - <i>Activity</i>	5
2. Sun, Wind, Circulation, and Climate – <i>Activity &amp; Quiz Portions</i> (w/ separate due dates)	5
3. Soils, Plants, Ecosystems, Biomes - <i>Activity</i>	5
4. Tectonic Processes, Weathering and Mass Movements – <i>Quiz</i>	5
5. Fluvial, Glacial, Arid Land, and Coastal Processes and Landforms - <i>Activity</i>	5
Exams	
Midterm 1	20
Midterm 2	20
Final Exam	20
Total	100

### Daily Quizzes

Quizzes are scheduled for most class sessions for which a reading has been assigned, and for which a lecture will be provided (see Provisional Schedule below). Preparation is key to

success on quizzes – read the assigned material, pay attention during lecture, identify any content that you would like clarified, and be sure to remain until the end of class to complete and submit the quizzes. Quizzes will be administered towards the end of the class session so that you have the benefit of lecture, and you must upload those to a Moodle drop box prior to the end of the session.

Attendance and in-class quizzes will require your presence in class. I will discount a certain number of in-class quiz points to allow for unforeseen absences owing to the vagaries of life (numbers to be determined, but likely 5 percent of the total available). You should inform me of necessary or planned absences in advance of those. Absences related to occasional or protracted illnesses can be excused, and work made up, with proper notification and documentation (also see below for exam make-up policy).

### Assignments

Five assignments that correspond to major components of the course content are scheduled for the semester. These will take different forms (more interactive or quiz formats) depending on the course schedule so that you can have feedback on your understanding of course material in advance of exams. These can be completed individually, or you may work with classmates on these, but each class member must submit their own assignments for evaluation. Assignments will be available via Moodle as the relevant material begins to be covered, and must be submitted via Moodle drop boxes or quiz submissions by the specified due date (see below for the late submission policy). Late submissions will result in 5 percent point deductions from the total possible for each calendar day following the submission deadline (5 percent for first 24 hours, 10 percent for the next, etc.).

### Exams

Two midterm examinations are scheduled during the semester, and one final examination. The midterms are not cumulative with respect to particular material, but concepts that you are expected to know are generally related to prior information/content. The final exam will have a comprehensive element as well as testing your knowledge of material covered since the second midterm. Exam questions may be of the following types: multiple choice, true-false, matching, short answer. Questions will focus on material covered in lecture, so it is important that you attend classes regularly and pay particular attention to the content of lectures as you prepare for exams.

I will not allow make-up exams unless notified beforehand of the problem at hand. Be prepared to provide documentation for events causing absences if you require a makeup exam.

### Provisional Course Schedule\*:

Week	Day & Topic	Reading(s)	Assignments
1 1/11-1/15	M: Intro to Course & Physical Geography W: Geographic Inquiry F: Scientific Method	M: NA W: Syllabus, Chapter 1; F: (1) <a href="https://www.oercommons.org/courses/physical-geography-2/view">https://www.oercommons.org/courses/physical-geography-2/view</a> (Scientific & Geographic Inquiry, Scientific Method); (2) Mystery Holes article (Moodle)	None assigned

Week	Day & Topic	Reading(s)	Assignments
2 1/18-1/22	<b>M: MLK Day – No Class</b> <b>W:</b> Geographers’ Tools <b>F:</b> Geographers’ Tools	<b>M:</b> NA <b>W:</b> Chapter 2 (pp. 11-27) <b>F:</b> Chapter 2 (pp. 27-end)	<b>W:</b> #1 Available
3 1/25-1/29	<b>M:</b> Earth Sun Geometry <b>W:</b> Global Energy System  <b>F:</b> Global Temp Patterns	<b>M:</b> Chapter 3 <b>W:</b> Chapter 4  <b>F:</b> Chapter 5	<b>W:</b> #1 Due; <b>W:</b> #2 Available
4 2/1-2/5	<b>M:</b> Atmos. Pressure, Wind, & Global Circul. <b>W:</b> Atmospheric Moisture & Precip. <b>F:</b> Cont’d	<b>M:</b> Chapter 6 <b>W:</b> Chapter 7 (pp. 119-130) <b>F:</b> Chapter 7 (pp. 130-end)	
5 2/8-2/12	<b>M:</b> Air Masses & Cyclonic Weather Systems   <b>W:</b> Global Climates and Climate Change  <b>F:</b> Cont’d	<b>M:</b> <b>(1)</b> Chapter 8; <b>(2)</b> <a href="https://www.climate.gov/news-features/blogs/enso/december-2020-la-ni%C3%B1a-update-walking-la-ni%C3%B1a-winter-wonderland">https://www.climate.gov/news-features/blogs/enso/december-2020-la-ni%C3%B1a-update-walking-la-ni%C3%B1a-winter-wonderland</a> <b>W:</b> Chapter 9 (pp. 174-188)  <b>F:</b> <b>(1)</b> Chapter 9 (pp. 188-end) <b>(2)</b> Rohli et al. (Moodle)	<b>W:</b> # 2 (Activity Portion) Due <b>F:</b> #2 (Quiz Portion) Due
6 2/15-2/19	<b>M: Presidents’ Day – No Class</b> <b>W: MIDTERM REVIEW</b> <b>F: MIDTERM 1 EXAM</b>	NA	
7 2/22-2/26	<b>M:</b> Plant Geography <b>W:</b> Soils <b>F:</b> Soils Cont’d	<b>M:</b> Chapter 10 <b>W:</b> Chapter 11 (pp. 229-244) <b>F:</b> Chapter 11 (p. 245-end)	<b>M:</b> #3 Available
8 3/1-3/5	<b>M:</b> Ecosystems Principles – Energy & Nutrient Flows <b>W:</b> Communities & Species Distributions <b>F:</b> Biodiversity, Evolution, Ecosystem Stability	<b>M:</b> Fisher Sections 2.2, 2.4, 3.1, 3.2 (Moodle) <b>W:</b> Fisher Section 4.4 (Moodle) <b>F:</b> Fisher Sections 5.2-5.5 (Moodle)	<b>F:</b> #3 Due
9 3/8-3/12	<b>M:</b> Earth’s Inner Structure, Rock Cycle <b>W:</b> Tectonic Processes & Landforms <b>F:</b> Cont’d	<b>M:</b> Chapters 12 <b>W:</b> Chapter 13 (pp. 289-303) <b>F:</b> Chapter 13 (pp. 303-end)	<b>M:</b> # 4 Available
10 3/15-3/19	<b>M:</b> Weathering & Mass Movements <b>W: MIDTERM REVIEW</b> <b>F: MIDTERM 2 EXAM</b>	<b>M:</b> Chapter 14 <b>W:</b> NA <b>F:</b> NA	<b>W:</b> # 4 Due
11 3/22-3/26	<b>M:</b> Groundwater & Karst <b>W:</b> Fluvial Systems & Landforms <b>F:</b> Cont’d	<b>M:</b> Chapter 15 <b>W:</b> Chapter 16 (pp. 354-363) <b>F:</b> Chapter 16 (pp. 364-end)	<b>M:</b> # 5 Available
12 3/29-4/2	<b>M:</b> Glacial Geomorphology <b>W:</b> Cont’d <b>F: Student Break – No Class</b>	<b>M:</b> Chapter 17 (pp. 387-403) <b>W:</b> Chapter 17 (pp. 403-end) <b>F:</b> NA	
13 4/5-4/9	<b>M:</b> Arid Lands & Processes <b>W:</b> Cont’d <b>F:</b> Coastal Processes	<b>M:</b> Chapter 18 (pp. 414-430) <b>W:</b> Chapter 18 (pp. 430-end) <b>F:</b> Chapter 19 (pp. 437-445)	
14 4/12-4/16	<b>M:</b> Coastal Landforms  <b>W:</b> Marine Biogeography <b>F:</b> Relevance & Challenges	<b>M:</b> Chapter 19 (Moodle, pp. 446-end) <b>W:</b> TBA <b>F:</b> Chapter 20 (pp. 465-469)	<b>W:</b> # 5 Due

Week	Day & Topic	Reading(s)	Assignments
15 4/19-4/23	M: Relevance & Challenges Cont'd W: Relevance & Challenges F: <b>FINAL EXAM REVIEW</b>	M: Chapter 20 (pp. 469-475) W: TBA F: NA	NA
<b>FINALS</b>	<b>FINAL EXAM</b>	NA	NA

\*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.