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# GPHY 111N.01: Introduction to Physical Geography

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## INTRODUCTION TO PHYSICAL GEOGRAPHY

(GPHY 111N)

## - Fall 2016 -

Class Meets: MWF 12:10-1:00 pm; Stone Hall 304

## Professor Ulrich Kamp, Ph.D.

Department of Geography Stone Hall, Room 205 Tel.: 243-4302, Fax: 243-4840 ulrich.kamp@umontana.edu http://www.cas.umt.edu/geography/faculty/kamp/kamp.html Office Hours: W 1:30 – 2:30 pm, F 11 am – 12 pm; and by appointment via email

## **Morgan Voss**

Teaching Assistant Department of Geography Stone Hall, 304B Fax: 243-4840 morgan.voss@umconnect.umt.edu Office Hours: M/W 10 – 12 pm, and by appointment via email

## **Course Description**

This course provides an introduction to physical geography: the study of the Earth's natural environments. The course starts with the principles and mechanisms of climate and weather, and then surveys landforms and earth surface processes. The final section of the class examines vegetation and ecosystems on global and regional scales. Throughout the course we use specific regional examples to illustrate and understand global processes. We give special 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.

## **Course Policies**

## **Class Attendance and On-time Appearance**

Attendance during the lectures is essential to your general success in class. Excessive lateness disturbs everyone else – please appear on time. You should have your breakfast before class.

## **Disability Modifications**

The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and Disability Services for Students. If you think you may have a disability adversely affecting your academic performance, and you have not already registered with Disability Services, please contact Disability Services in Lommasson Center 154 or call 406.243.2243. I will work with you and Disability Services to provide an appropriate modification.

### **Academic Integrity**

"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. The Code is available for review online at: http://life.umt.edu/vpsa/student\_conduct.php."

## **Readings, Assignments, and Examinations**

### Readings

The following reading is required: Foresman, T. & A. Strahler (2012): *Visualizing Physical Geography*. – Wiley, Chichester, 624 pages.

## **Additional Course Material**

If necessary, additional course material will be made available online through Moodle after the lectures in class. Download and use these resources for your studies in preparation for assignments and exams.

#### Assignments

Together with a partner you will work on six assignments. Assignments have to be handed in before the lecturing starts on the due date. No late work will be accepted. There is no extra credit.

#### Examinations

All three exams will take place in the classroom. They are subjective, not comprehensive; this means that the exam will encompass only the material that is covered in lectures and discussions between exams. In general, each examination will be a combination of multiple choice. The rules for the examinations are as follows:

- 1. You will take each exam as scheduled. Make-up exams are not allowed—except as listed in the Make-up exam policy below.
- 2. Material for the exam will be from the required textbook and other readings and all other distributed material. Attendance for each lecture is recommended in order that you take notes for each exam.
- 3. Make-up Exam Policy:
  - All Students must take the final exam as scheduled. Conflicts must be settled with the Dean. This is University Policy and there are no exceptions.
  - All Students must take each exam as scheduled. If an exam is missed, the student will receive a zero (0) on the exam.
  - These are the only exceptions that will warrant a make-up exam: university events—such as sporting or music events; military obligations; religious holidays; serious family emergency; medical emergencies or serious illness; court-imposed legal obligations such as subpoenas or jury duty; serious weather conditions; special curricular requirements such as judging trips or field trips.
  - Any student requiring an exception under this policy must do so **prior** to the scheduled exam unless in the case of an actual emergency (sudden hospitalization). A student must provide official documentation of the reason for absence **in advance**.
  - If a make-up exam is approved. It must be completed within one week of the original exam and scheduled with the Teaching Assistant.

#### **Discussion Sessions**

The teaching assistant is available during the office hours for discussions dedicated to problem solving, clarification of challenging concepts, and work on the problem sets.

## **Work Evaluation and Final Grading**

#### Grade Breakdown

6 Assignments	60%
Three Exams	30%
Attendance	10%

### **UNEXCUSED** Missed Classes

0-2	А	3	В	4	С	5	D	>5	F

## **Grading Scheme**

93-100 A	•	87-89	B+	77-79	C+	67-69	D+	<60	F
	83-86	В	73-76	С	63-66	D			
90-92	A-	80-82	B-	70-72	C-	60-62	D-		

Late assignments will be penalized. An assignment that is turned in one day late will have 10% of the available points deducted from the score. An assignment that is turned in two days late will have 20% of the available points deducted from the score. No credit will be awarded for assignments that are more than two days late. "Day" denotes a business day (Monday through Friday) not the time interval between class meetings. For example, an assignment that is due on Thursday but turned in on Monday will be counted two days late.

## **Tentative Schedule**

Date	Topic	Readings	Remarks
WEEK 1			
29-Aug	Introduction		
31-Aug	01 - Science; Systems		
02-Sep	02 - Shape of Earth; Global Time	Chapter 1	
WEEK 2			
05-Sep	Holiday: Labor Day		NO CLASS
07-Sep	03 - Map Projections	Chapter 1	
09-Sep	04 - Earth and Sun; Seasons	Chapter 1	
WEEK 3			
12-Sep	05 - Composition and Structure of the Atmosphere	Chapters 2+3	
14-Sep	06 - Radiation and Temperature	Chapters 2+3	
<u>16-Sep</u>	07 - Energy Balances	Chapter 2	Assignment 1 due
WEEK 4		01 / 0	
19-Sep	08 - Global Temperature Patterns	Chapter 3	
21-Sep	09 - Humidity, Clouds, Precipitation	Chapter 4	
23-Sep	10 - Winds; Forces within the Atmosphere	Chapter 5	
<b>WEEK 5</b> 26-Sep	11 - Atmospheric Circulation	Chapter 5	
26-Sep 28-Sep	11 - Atmospheric Circulation 12 - Oceanic Circulation	Chapter 5 Chapter 5	
28-Sep 30-Sep	13 - Weather Systems	Chapter 6	Assignment 2 due
<b>WEEK 6</b>			
03-Oct	Exam 1		
05-Oct	14 - Violent Weather	Chapter 6	
07-Oct	15 - Global Climates	Chapter 7	
WEEK 7			
10-Oct	16 - Past Climates	Chapter 14	
12-Oct	17 - Global Climate Change	Chapter 3	
14-Oct	18 - The Geologic Cycle	Chapter 8	Assignment 3 due
WEEK 8			
17-Oct	19 - Plate Tectonics	Chapter 8	
19-Oct	20 - Plate Boundaries	Chapter 8	
21-Oct	22 - Earthquakes	Chapter 9	
WEEK 9			
24-Oct	23a - Plutonism	Chapter 9	
26-Oct	23b - Volcanism	Chapter 9	
28-Oct	24 - Weathering	Chapter 10	Assignment 4 due
WEEK 10		01 / 11	
31-Oct	25 - Karst	Chapter 11	
02-Nov	26 - Mass Wasting	Chapter 10	
04-Nov WEEK 11	Exam 2		
07-Nov	07 Undrological Cycele	Chapter 11	
07-Nov 09-Nov	27 - Hydrological Cycle 28 - Water Supply	Chapter 11 Chapter 11	
11-Nov	Holiday: Veterans Day		NO CLASS
WEEK 12			
14-Nov	29a - Fluvial Processes	Chapter 12	
16-Nov	29b - Fluvial Landforms	Chapter 12	
18-Nov	30 - Coastal Processes and Landforms	Chapter 13	Assignment 5 due
WEEK 13		^	
21-Nov	31 - Eolian Processes and Landforms	Chapter 13	
23-Nov	Holiday: Thanksgiving		NO CLASS
25-Nov	Holiday: Thanksgiving		NO CLASS
WEEK 14			
28-Nov	32 - Periglacial Processes and Landforms	Chapter 10	
30-Nov	33 - Glacial Processes and Landforms	Chapter 14	
02-Dec	34 - Soils	Chapter 15	
WEEK 15			
05-Dec	35 - Ecosystems	Chapter 16	
07-Dec	36 - Biodiversity and Species Loss	Chapter 16	
09-Dec	37 - Global Biogeography	Chapter 17	Assignment 6 due
WEEK 16	E 2. 8.00 10.00 · · ·		
15-Dec	Exam 3, 8:00 - 10:00 am		