

GEOGRAPHY 206: PHYSICAL GEOGRAPHY

Spring, 2013

Instructor: Dr. **Randall Schaetzl**

Office: 128 Geography Building

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Office Hours: M & W, 12:00-2:30, and by appt.

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Text: Arbogast, A.F. 2011. **Discovering Physical Geography**. 2nd ed. Wiley. (REQUIRED)

Equivalent texts are also acceptable, use at your own discretion and risk.

Lectures: M, W, 10:20-11:40, Rm. 128 Natural Sciences Bldg.

Teaching Assistant: Brad Miller (bamiller@msu.edu). His office hours: M 12:00-1:00; W 12:30-2:30

COURSE GOALS:

This course is designed to provide a survey of the many aspects of the physical planet Earth, as taught under a distinctly geographic framework. Major topics of consideration are: weather (meteorology), vegetation and plant ecology, rocks and weathering, landforms, surficial processes, and soils. Emphasis is placed on explaining and appreciating the physical landscape and environment, and Michigan examples get prioritized. There are no prerequisites for this class.

A laboratory course (GEO 206L) that stresses applications of the material discussed in GEO 206 may be taken concurrently, or during any ensuing term. **I encourage you to take this class.** Students do NOT need to enroll in the lab to receive credit for GEO 206.

EXAMS and QUIZZES:

EXAMS: There will be two hourly examinations and a final exam---dates for which are provided below. The exams will consist of T/F and multiple choice questions, *as well as "visual" and fill-in-the-blank and written response questions.* You will have the full class period to complete each of the first two exams. The final exam is comprehensive but stresses the last section of the course. Makeup EXAMS are only allowed in cases where a physician's excuse is presented. If an exam is missed due to a family funeral, a newspaper obituary (with the date of the newspaper issue clearly shown) must be presented to the instructor within four class days of the missed exam. In all cases the make-up must be done prior to the regularly-scheduled exam. If the student cannot take the make-up exam early, it will be dropped and the remaining exams will be increasingly weighted appropriately.

QUIZZES: Five short (5 minute-long), 15 point quizzes will be administered *randomly* throughout the term. These will occur at the immediate start of lecture, and will be unannounced. They will **ONLY** cover the information from the previous lecture and/or related material in the text. Quizzes will have no "bubble sheet" questions but will, instead, have a variety of written response questions. The student's quiz with the lowest score will not be counted toward the final point total (*i.e.*, it will be dropped). Make-up quizzes *will not* be allowed. If you arrive late for a quiz, extra time will not be provided. Extra credit points are not given in GEO 206, although students who take all four quizzes and drop a score are advantaged.

GRADING:

There are 400 possible points to be earned in Geography 206. All grades will be curved. Except for extreme cases, a final point total of 50% is the **minimum point total for a passing grade** in GEO 206.

First Exam:	100 points
Second Exam:	100 points
Final Exam:	140 points
Four Highest Quizzes:	<u>60 points</u>
Total:	400 points

ADDITIONAL GEO COURSES:

The Department of Geography at MSU offers a number of courses that expand on topics covered in GEO 206. GEO 203 (Intro to Meteorology) is a companion course; it has no prerequisites. Additional, more advanced courses are not included in the list below. I am always happy to discuss the content of any GEO course with you.

GEO 206L	Physical Geography Laboratory	GEO 203	Introduction to Meteorology
GEO 208:	Physical Geography of the National Parks	GEO 333	Geography of Michigan and the Great Lakes Region
GEO 401	Plant Geography	GEO 402	Agricultural Climatology
GEO 306	Environmental Geomorphology	GEO 407	Regional Geomorphology of the United States
GEO 408	Soil Geomorphology Field Study		

LECTURE OUTLINE: GEO 206

<u>DATE</u>	<u>LECTURE TOPICS</u>	<u>TEXT READINGS</u>
<i>THE EARTH-SUN CONTEXT</i>		
Jan 7	Introduction, latitude-longitude	2-9; 16-21
Jan 9	Earth-Sun geometry and seasonality	44-61
<i>THE ATMOSPHERE</i>		
Jan 14	Atmospheric composition and layers; ozone	66-74; 92-95
Jan 16	Energy, radiation, insolation	64-66; 74-87
Jan 21	No class – MLK Day	
Jan 23	Air temperature and pressure	95-110; 112-119
Jan 28	Atmospheric moisture, uplift	146-162; 169-173
Jan 30	Air pollution, fog, wind	120-125; 135-139
Feb 4	Global circulation	125-134
Feb 6	Air masses, fronts and cyclonic storms	178-183
Feb 11	Cyclonic storms, jet streams	130-131; 184-190
Feb 13	Thunderstorms, hail and lightning	191-195
Feb 18	Tornadoes, hurricanes	195-207
Feb 20	FIRST EXAM	
Feb 25	<u>Exams back</u> , Climate controls	212-214
Feb 27	Climates of the world	214-228
Mar 4 – Mar 8	SPRING BREAK!!	

DATE LECTURE TOPICS

TEXT READINGS

THE BIOSPHERE

Mar 11	Biogeographic concepts	248-256
Mar 13	Succession, disturbance, biomes	268-269
Mar 18	Biomes	256-265
Mar 20	More biomes!	
Mar 25	SECOND EXAM	

THE LITHOSPHERE

Mar 27	<u>Exams back</u> , Geomorphology concepts, rock types	326-338
Apr 1	Landforms on flat-lying and folded sedimentary rocks	504-509
Apr 3	Vulcanism and volcanic landforms	379-386
Apr 8	Weathering, mass wasting	394-410
Apr 10	Soils	280-298
Apr 15	River systems and running water	432-442
Apr 17	Fluvial landforms	442-460
Apr 22	Glacial systems and landforms	470-492
Apr 24	Eolian systems and landforms	509-519

Thursday, May 2 **Cumulative FINAL EXAM** 10:00-12:00