

Dr. Jim Dyer

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GEOG 1100: Physical Geography [9209]

4 credit hours

Fall 2021-2022

MWF 9:40-10:35

Bentley Hall 240

- There are two **Blackboard** pages for GEOG 1100: one for lecture, and one for lab.
- This course utilizes **Top Hat**. You will need to download the free software and bring your device (laptop, tablet, smart phone, etc.) to lecture each day. (*Details below.*)

Geography focuses on spatial distributions – why are things found where they are? It involves both the recognition of landscape patterns, as well as an understanding of the processes that create those patterns. Specifically, *physical* geography examines the interacting processes of the earth's atmosphere [air], hydrosphere [waters], biosphere [living organisms], and lithosphere [solid earth], in order to understand the natural environment in which we live, as well as the role of humans in affecting that environment.

Specific learning outcomes for the course include:

1. Understand Earth-Sun relationships and their connection to latitude and longitude.
2. Identify components associated with weather and atmospheric processes such as cloud types, precipitation, pressure, and wind.
3. Identify the general weather patterns that exist around the globe and understand the processes associated with these patterns.
4. Identify general climate zones and soil profiles.
5. Explain how variations in climate relate to global distributions of plants and animals.
6. Identify glacial, fluvial, coastal landscapes, and the processes associated with them.

General Education requirements: GEOG 1100 is a Natural Sciences Pillar in Ohio BRICKS, and satisfies Tier II Natural Sciences (2NS). It is required of all Geography majors, who need to earn a minimum grade of C.

Text: *The Physical Environment: an Introduction to Physical Geography*, by Michael E. Ritter.

Links to the free online text are provided on Blackboard. The text reinforces material presented in lecture in a narrative format, providing useful graphics and descriptions.

Lab Book: *Physical Geography Lab Manual* is available for purchase at Little Professor Book Center, 65 S. Court St. Additional details provided below.

Top Hat: Top Hat is a student response system that utilizes students' personal devices (smart phones, tablets, laptops, etc.) combined with interactive slides presented during lecture. You are **required** to download the software and bring your device to class each day; you will use Top Hat to earn credit for participation. (If you don't own a suitable device, notify me right away.) We will go over details of using the application during the first week of class, but be prepared for a "practice run" the first day.

- Link to log in to Top Hat: <https://app.tophat.com/>. GEOG 1100 **Join Code: 286212**. A Student Quick Start Guide is also available: <https://support.tophat.com/s/article/Student-Top-Hat-Overview-and-Getting-Started-Guide>. (These links are also posted on Blackboard for lecture.)

You do have homework in this class! During lecture, interpret what the professor is saying (not just what is written on PowerPoint or the boards) into your notes. (*Something to consider: studies suggest that writing, as opposed to typing your notes, "cements" the information better in your brain.*) Before the next class, spend a half-hour or more clarifying, organizing, and actively reviewing previous material. Occasionally, homework may also be assigned and collected. **ASIDE FROM NOTE-TAKING, NO RECORDING OF LECTURE OR PROJECTED MATERIALS IS PERMITTED WITHOUT EXPLICIT INSTRUCTOR APPROVAL.**

Grading:

Your course grade is based on your performance in lecture, and the related (but separate) lab activities.

- Four exams (66.7% of your overall grade)
- Participation (8.3%) based on Top Hat questions presented throughout each class. Whether you answer correctly or not does not influence credit, only whether you participate.
- Lab (25% of your grade). You must pass the lab to pass the course. Points are earned in lab through:
 - Map/reading quizzes at start of each lab
 - Lab assignments completed each week
 - Semester-long “Landscape Observation” project

Exams: There will be three exams during the semester as well as a non-cumulative final. Each will consist of 50 objective questions (matching, true-false, mostly multiple-choice), worth 1 point each. Hats, earphones, and electronic devices are not allowed during exams. **You must complete all exams to pass the course.**

Participation (NOT attendance) will count 8.3% of your final grade, and will entail in-class activities usually (but not always) using Top Hat. These activities and questions allow you to judge how well you understand the material, but you will not be graded on whether you answer the question correctly.

Even though a right/wrong answer does not matter for participation credit, take note of how you do on these! (View your responses under the Gradebook tab in Top Hat.) If you get questions wrong, it indicates that you don't fully understand the material that was just presented. Use that as your indication to talk to me during office hours, so you can improve your performance on the exams.

In order to receive credit, you must “participate” in these activities, and you must remain for the entire class period. **You cannot receive credit without your Top Hat-enabled device.** If you present a documented excuse for missing class (e.g., OU-sanctioned activity), you may be marked as excused for the day's participation. Two in-class activities will be dropped to allow for malfunctioning or forgotten devices, unexcused absences, etc.

Your **lab grade** (see below) will contribute 25% of your final grade. **You must pass the lab ($\geq 60\%$) to pass the course.**

It is a good practice to save your graded and returned assignments until you receive your grade for the course.

<u>% of Grade</u>	<u>Activity</u>
16.7	Exam 1
16.7	Exam 2
16.7	Exam 3
16.7	Exam 4 (<i>Final exam</i>)
8.3	Participation (<i>in-class activities usually using Top Hat; drop 2</i>)
25.0	Lab

Grading scale:

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
93-100%	90-92	87-89	83-86	80-82	77-79	73-76	70-72	67-69	63-66	60-62	≤ 59

Special Circumstances

If you are unable to participate in the course, or take any exam on the specified date during the semester for a legitimate reason (e.g., illness, death in your immediate family, religious observance, jury duty, required military reserve training, involvement in University-sponsored activities), notify me ASAP about making up the missed material; you may be able to take the exam early. If you miss an exam for some highly compelling reason, you must contact me within a day of the missed exam about a possible make-up. (Note: misrepresenting your reasons for missed exams, labs, or assignments constitutes academic dishonesty; see paragraph below.) Make-up exams will be essay format. There will be no credit for in-class activities without an excused absence.

Any student who suspects s/he may need a disability-based accommodation should contact me privately to discuss specific needs, and provide me written documentation from the Office of Student Accessibility Services. If the student is not yet registered as a student with a disability, s/he should contact that office.

☠ Cheating and plagiarism are dishonest and unethical. These are traits we do not condone as a society, and this is especially true in the academic community (of which you are a member). Academic dishonesty will not be tolerated in this class. Anyone caught cheating will receive a zero for the assignment. Academic dishonesty includes (but is not limited to) sharing answers on graded assignments, misrepresenting your reason for a missed assignment, looking at another student's answers (or allowing another student to look at your answers), presenting another person's work as your own, responding to in-class questions with a device that is not your own, "participating" in Top Hat when you are not present in the classroom, attempting to leave the classroom with a copy of a test, or using advantages not approved by the instructor. Cases of academic misconduct may also be reported to the Office of Community Standards and Student Responsibility, which may impose additional sanctions. (Students may appeal any academic sanctions through the grade appeal process.)

Attendance, Office Hours, & e-mail

This course provides an in-depth overview of the Earth's physical environment, which means a lot of information will be covered in class! **Attendance is expected**, and obviously required to receive participation credit for in-class activities. I welcome visits (individually or in a group) during office hours to discuss lecture topics, or ways to improve performance on exams. (Questions dealing with Labs should first be directed to your TA.) It's best to clear up questions as they arise, but we can meet immediately before (and after) exams. If your question requires only a brief answer, feel free to e-mail me, and I will reply promptly. Please include "GEOG 1100" in the subject line, and sign your name at the end of your message. **During the semester I will send out announcements and messages to your "official" e-mail account (your "ohio.edu" address). There is an expectation that students monitor their e-mail accounts.** In addition to connecting via e-mail, we can also have "video office hours" using Teams (or Zoom); e-mail me to arrange a meeting time.

Classroom etiquette:

- It is disruptive to arrive late, or to get up and leave while class is still in session. If for some reason you can't get to class on time or must leave early, please extend the courtesy of informing me beforehand. If you come in late, grab a seat unobtrusively. And don't pack-up your things before the end of lecture!
- Obviously we will be using devices for Top Hat. But please refrain from using your devices for non-classroom use, which can be a distraction for you, students around you, and me. (Studies indicate a quarter of students check phones >5 times per class – compulsive behavior akin to addiction. And >40% of in-class laptop use is not related to class activity.) Everyone performs better without distractions. Instead of using your devices if you get bored, compose a handwritten letter for someone; they would really appreciate receiving it.

Physical Geography Labs. All meet in 115 Clippinger

Students enrolled in Physical Geography must also attend the lab for which they've registered:

Lab Time	Call Number	Section
W 11:50 – 1:40 pm	9456	101
W 2:00 – 3:50 pm	9457	102
Th 9:40 – 11:30 am	14819	103
Th 12:00 – 1:50 pm	14820	104
Th 2:00 – 3:50 pm	14821	105
F 11:50 – 1:40 pm	15877	106

Your lab grade contributes 25% of your overall course grade. In order to pass the course, you must pass the lab ($\geq 60\%$).

Labs will start the second week of the semester (Sept 1/2/3), and you will need to bring your lab manual. On the first day, the teaching assistants will go over the syllabus, office hours, and grading procedures for the lab. Although the labs amplify and reinforce material covered in lecture, material from labs will not be included on the lecture exams.

Required Lab Book:

Physical Geography Lab Manual, available at Little Professor Book Center, 65 S. Court St.

Familiarize yourself with the day's activities before going to lab: **READ OVER THE EXERCISE, AS WELL AS THE ASSIGNED TEXTBOOK READINGS** (hyperlinked on your Lab Blackboard site) **BEFORE ATTENDING EACH WEEKLY LAB**. There will be a quiz on the assigned reading during the first lab meeting, so be sure to come prepared! Subsequent labs may also have a map quiz component.

Many of the exercises require data to be gathered outside, so you will need to dress accordingly. For each lab, bring a calculator (on your phone is fine) and your course lecture notes.

Questions about labs (such as excused absences) should first be directed to your TA. Contact information is available on both the lecture and lab Blackboard sites.

All associated materials developed by the instructor for this class, including lectures, classroom activities, and labs are copyrighted in the name of James Dyer on 23 August 2021.

TENTATIVE LECTURE SCHEDULE – Subject to Change

Week (beginning)	Topics	Reading (linked on Blackboard)	Lab
Week 1 Aug 23	<ul style="list-style-type: none"> 🌐 Course Introduction 🌐 Latitude and Longitude 🌐 Earth-Sun Relationships 	<ul style="list-style-type: none"> • Chapter 1, <i>Essentials of Geography</i> • Chapter 2, <i>The Earth System</i> [begin at “Size and Shape;” stop at “The Continents”] 	No Lab
Week 2 Aug 30	<ul style="list-style-type: none"> 🌐 Atmosphere Composition and Structure, Matter and Energy in the Atmosphere 🌐 Energy in the Earth-Atmosphere System - Solar and Earth Radiation 	<ul style="list-style-type: none"> • Chapter 3, <i>The Atmosphere</i> • Chapter 7 [part]: “Phase Changes of Water” • Chapter 4, <i>Energy and Radiation</i> 	1: Location on the Spherical Earth
Week 3 Sep 6	<p><i>No Class Monday: Labor Day</i></p> <ul style="list-style-type: none"> 🌐 Radiation Balances 🌐 Global Temperature Patterns 	<ul style="list-style-type: none"> • Chapter 4, <i>Energy and Radiation</i> [from prev. week] • Chapter 5, <i>Air Temperature</i> 	2: Surveying & Plotting Location
Week 4 Sep 13	<ul style="list-style-type: none"> 🌐 Atmospheric Pressure and Winds 🌐 Global Circulation <p>FRIDAY (9/17): EXAM 1 (covering material through “Global Temperature Patterns”)</p>	<ul style="list-style-type: none"> • Chapter 6, <i>Atmospheric and Ocean Circulation</i> • Chapter 7 [part]: “Geographic Distribution of Precipitation” 	3: Map-Reading Trials
Week 5 Sep 20	<ul style="list-style-type: none"> 🌐 Atmospheric Stability 🌐 Water in the Atmosphere: Humidity; Clouds and Precipitation 	<ul style="list-style-type: none"> • Chapter 7 [part]: “Adiabatic Temperature Change and Stability, ” “Humidity” [from prev. week], “Clouds and Precipitation” 	4: Solar Radiation, Temperature, & Atmospheric Moisture
Week 6 Sep 27	<ul style="list-style-type: none"> 🌐 Jet Streams, and Air Masses 🌐 Midlatitude Weather: Fronts and the Midlatitude Cyclone <p><i>No Class Friday: Fall Break</i></p>	<ul style="list-style-type: none"> • Chapter 8 [part]: “Air Masses,” “Fronts,” “Cyclogenesis,” and “Weather and Wave Cyclones” 	No Lab / Landscape Observation Site Visit!
Week 7 Oct 4	<ul style="list-style-type: none"> 🌐 Severe Weather: Tornadoes and Hurricanes 🌐 Global Climate Patterns 	<ul style="list-style-type: none"> • Chapter 8 [part]: “Severe Weather” • Chapter 9, <i>Climate Systems</i> 	5: Weather Map Analysis
Week 8 Oct 11	<ul style="list-style-type: none"> 🌐 Global Climate Patterns <i>cont.</i> <p>FRIDAY (10/15): EXAM 2 (covering material through “Severe Weather”)</p>	<ul style="list-style-type: none"> • Chapter 9, <i>Climate Systems</i> [from prev. week] 	6: The Water Balance
Week 9 Oct 18	<ul style="list-style-type: none"> 🌐 Biogeography: Soils and Vegetation 	<ul style="list-style-type: none"> • Chapter 11, <i>Soil Systems</i> 	7: Soil Analysis
Week 10 Oct 25	<ul style="list-style-type: none"> 🌐 Biogeography: Biomes 	<ul style="list-style-type: none"> • Chapter 12, <i>Biogeography of the Earth</i> • Chapter 13, <i>Earth Biomes</i> 	8: Climate, Soils, and Biomes
Week 11 Nov 1	<ul style="list-style-type: none"> 🌐 Geomorphology: Landforms Formed by Running Water <p>FRIDAY (11/5): EXAM 3 (covering material through “Biogeography”)</p>	<ul style="list-style-type: none"> • Chapter 18, <i>Fluvial Systems</i> 	9: Topographic Maps
Week 12 Nov 8	<ul style="list-style-type: none"> 🌐 Fluvial Processes and Landforms <i>cont.</i> 🌐 Geomorphology: Landforms Created by Glaciers 	<ul style="list-style-type: none"> • Chapter 18, <i>Fluvial Systems</i> [from prev. week] • Chapter 19, <i>Glacial Systems</i> 	10: Hydrology of the Hocking River
Week 13 Nov 15	<ul style="list-style-type: none"> 🌐 Glacial Processes and Landforms <i>cont.</i> 🌐 Geomorphology: Coastal Landforms 	<ul style="list-style-type: none"> • Chapter 19, <i>Glacial Systems</i> [from prev. week] • Chapter 21, <i>Ocean and Coastal Systems</i> 	11: Landform Analysis with Google Earth (via Blackboard, no in-class meeting)
Week 14 Nov 22	<ul style="list-style-type: none"> 🌐 Earth Structure, and Rock Types <p><i>No Class Wednesday-Friday: Thanksgiving Break</i></p>	<ul style="list-style-type: none"> • Chapter 14, <i>Earth Materials and Structure</i> 	No Lab; work on “Landscape Observations” assignment
Week 15 Nov 29	<ul style="list-style-type: none"> 🌐 Plate Tectonics 🌐 Earthquakes and Volcanoes 	<ul style="list-style-type: none"> • Chapter 15, <i>Tectonics and Landforms</i> • Chapter 16, <i>Volcanic Processes & Landforms</i> 	Final Landscape Observations Projects due at lab time

FINAL EXAM (covering material after “Biogeography”): **Friday, December 10th @ 8:00 am** in the regular classroom. *Note – this date will not be changed. Do not make plans to leave Athens before the exam!*