

# Physical Geography

GEOG 101

Section 005: Tuesdays and Thursdays, 11:00-12:15pm Lecture Hall

## Course Syllabus

### Professor:

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Office Hours: by appointment, or  
    Tuesday 3 – 4pm  
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Office Hours:  
    Monday 1-3pm  
    Tuesday, 1-3pm  
    Wednesday 1-3pm  
    Thursday 1-2pm  
    Friday 9-10am

## Resources

Text: Geosystems 5<sup>th</sup>, 6<sup>th</sup>, or 7<sup>th</sup> edition. R.W. Christopherson. Prentice Hall: NJ.  
NOTE: older versions may be bought online for \*significantly\* cheaper prices. Be careful not to buy the paperback study guides, the laboratory manuals, or ‘Elemental Geosystems’ instead of this textbook.

subliminal message: BUY THE TEXTBOOK

Course Outline: <http://pages.towson.edu/mroberge/PG/CourseOutline.pdf>

Course Website: <http://pages.towson.edu/mroberge/PG/>

LearnOnline: <http://bbweb.towson.edu/> Use this to access your grades.

*\*\*Please bring a copy of your notes and the Course Outline to every class.\*\**

Instructor Information .....	1
Resources .....	1
Table of Contents .....	1
Disability Support Services .....	2
Course Goals .....	2
Course Description .....	2
Evaluation .....	3
Attendance Policies .....	3
Policy on Readings .....	4
Academic Integrity .....	4
Course Calendar: <i>Topics, Readings, &amp; Exam Schedule</i> .....	5
How to study for this course .....	6
Learning tools .....	7

*This three-credit course meets the General Education requirements for a non-lab Science course in Category II.A.1. A minimum grade of “C” is required for Geography majors. Students may repeat this course only once to try for a better grade.*

### **Disability Support Services**

Students with disabilities are encouraged to register with Disability Support Services (DSS) 7720 York Road, Suite 232, (410) 704-2638. Students who suspect that they have a disability but do not have documentation are encouraged to contact DSS for advice on how to obtain appropriate evaluation. A memo from DSS authorizing your accommodation is needed before any accommodation can be made.

### **Course Goals**

This course will provide students with an understanding of:

- The processes that govern the atmosphere and the Earth’s surface
- How human actions modify the physical environment
- How physical systems affect human social systems
- How scientists learn about physical systems

By the end of the semester, students will be able to explain the following to a peer, or be able to apply their knowledge of the following to their lives:

1) Measuring location with latitude and longitude, 2) the role of the Sun and orbital motions in regulating the seasons, 3) the composition and structure of the atmosphere, 4) the role of the atmosphere in reflecting, absorbing and transmitting different wavelengths of energy, 5) the processes that control temperature, 6) the circulation of the atmosphere and ocean, 7) the properties of water and the roles it plays in the atmosphere, 8) the movement of air masses and weather systems, 10) the climate of the Earth and climate change, 11) the tectonic processes that control plate movement and 12) shape the lithosphere’s surface, 14) the mechanisms that allow rivers, 15) wind, 16) coastal processes and 17) ice to shape the Earth’s surface, 19) the processes that recycle nutrients and energy through the biosphere, 20) the environmental factors that limit biological growth and life’s adaptations to these limiting factors, and the role of Geography in studying each of these issues.

### **Course Description**

The course is split roughly in half. The first half explores atmospheric processes (weather and climate), while the second half examines the processes that shape the biosphere and Earth’s surface. I will pay special attention to explaining the *processes* that shape our environment, as opposed to descriptions of the current state of the environment. For example, instead of just memorizing the names and locations of the Earth’s wind patterns, we will learn about how differential heating of the Earth creates differences in air pressure, and how these gradients combine with the Coriolis Effect to produce the characteristic circulation patterns of the atmosphere. Another important focus for this class (and for all of Geography) will be on the interaction between society and its physical environment. When we discuss the climate, we will also discuss Global Warming. When we discuss ecosystems, we will also discuss the impact that humans have had on biodiversity.

Please consult the Course Calendar (page 5) and the Course Outline (on the website) for a more detailed description of the topics to be discussed in class.

## Evaluation

Your progress in this course will be evaluated using exams, quizzes, homework, and an out-of-class activity. Each Exam, including the final, will cover the new material learned since the previous exam. The exams contain multiple choice, matching, short answer, essay, and map questions. Quizzes are unannounced short-answer questions that are given in the first five minutes of class. Don't come to class late! I use quizzes to make sure that everyone is keeping up with the material and to force you to study every day. Homework includes worksheets or assignments that I may give you during the semester. The homework is meant to reinforce concepts that seem to be particularly challenging. The Project is a special out-of-class assignment that should take you approximately 3 hours.

<u>Item</u>	<u>Number</u>	<u>Percentage</u>
Exams	4	18% each, 72% total
Quizzes	14-20	} 18%
Homework	2-3	
Project	1	10%

Each of the four exams is worth 18% of your final course grade, and your quiz/homework average is also worth 18% of your final grade. The project is worth 10% of your final grade. At the end of the semester, your point totals will be added up and converted to a letter grade. I reserve the right to raise or lower each grade slightly, depending on circumstances such as extraordinary progress made in the course or other mitigating circumstances.

Letter grades communicate the following about your performance:

- A: superior work that is outstanding or unusually good. (90% or above)
- B: well done, competent work. (80% or above)
- C: average achievement. (70% or above)
- D: below average. (60% or above)
- F: work that is unacceptable for college credit. (below 60%)

These grades are further specified using plus (+) and minus (-) designations.

You can see your current grade through the LearnOnline gradebook (<http://bbweb.towson.edu>). Towson University policy prohibits me from discussing grades via email.

## **Attendance Policies**

Attendance is important. Students who miss our discussion of a topic will have difficulty learning this topic on their own. There are no ‘good’ days to skip. I try not to have any light days—I think it is better to spread the work out evenly over the semester. If you are going to miss a class, please come see me or the teaching assistant. I can give you an overview of what you will miss, and help you with the notes.

You may take a make-up or miss an exam, quiz, or the activity for only two reasons: we have agreed ahead of time to some sort of arrangement, or for certain unanticipated ‘emergency’ types of excused absences. NOTE: Although religious holidays are excused absences, you must arrange the details of your absence with me ahead of time.

If you believe that there is a chance that you may miss more than four classes, you may want to enroll in this class during a different semester, when you will have fewer interruptions. The withdrawal deadline is April 6<sup>th</sup>.

## **Policy on Readings**

You are responsible for reading each chapter BEFORE we cover that topic in class. Review the ‘Key Learning Concepts’ at the beginning of each chapter before you read, and make sure that you can do these things by the time that you are finished reading the chapter. After the lecture, you should be able to complete all of the questions at the end of each chapter. Make sure that you read everything in the chapter- the news items and special boxes help illustrate the material by applying the concepts to unusual or interesting situations.

Consult the Course Calendar for the approximate starting date of each chapter; you may also want to follow along with the Course Outline.

## **Academic Integrity**

Students are expected follow the student Code of Conduct. Violations include plagiarism, fabrication or falsification, cheating, complicity in academic dishonesty, abuse of academic materials, and multiple submissions of materials. Descriptions of these violations are in the Student Academic Integrity Policy (online). I will penalize students who violate the code of conduct with an ‘F’ for the course or with an ‘F’ for the exam, at my discretion, and with a letter to the Office of Judicial Affairs.

**Course Calendar (subject to change)** The Course Calendar lists important material from each chapter. Please refer to the Course Outline for a more detailed listing of the main concepts that we will cover in this course.

Week	Topic	Readings
1	J27 J29 Welcome! Introduction to course; What is Geography? Latitude Longitude; Solar system, insolation, seasons;	Ch. 1 2
2	F3 F5 Seasons; Atmosphere: structure, lapse rate <i>Feb. 3: Add/drop deadline</i> Atmosphere: composition, pollution	3
3	F10 F12 Energy balance; global warming; urban heat islands Principle temperature controls; temperature patterns	4 5
4	F17 F19 <b>—Exam One—</b> Wind: air pressure, Coriolis effect; air pressure, wind patterns;	6
5	F24 F26 Ocean currents, properties of water; humidity; Lapse rates, adiabatic cooling, stability.	
6	M3 M5 Lifting mechanisms, air masses. Frontal systems; cyclogenesis. Thunderstorms.	7
7	M10 M12 Violent weather: tornadoes and hurricanes. <b>—Exam Two—</b>	8
8	M17 M19 <b>Spring Break!!!</b>	
9	M24 M26 <i>Class Cancelled: why not work on the project?</i>	
10	M31 A2 Geologic time; Earth's internal structure; rock types Plate tectonics; subduction; sea-floor spreading	11 12
11	A7 A9 <i>April 6: Last day to change to P/F or W</i> Continental & oceanic crust; faulting; folding; volcanoes Drainage basins, land use change & flooding;	14
12	A14 A16 River landforms and processes Stream restoration.	
13	A21 A23 <b>—Exam Three—</b> Ecosystems: components; limiting factors; pyramids.	19 + 20
14	A28 A30 Biomes. Coastal processes and landforms; Environmental problems and solutions for the coast	16
15	M5 M7 Ice: alpine & continental glaciers; Glacial landforms & climate change	17
16	M12 What will the future look like? <i>Last Class May 12.</i>	21
17	M19 <b>Final Exam Tuesday, May 19<sup>th</sup>, 10:15am-12:15.</b>	

## **How to study for this course**

I've been teaching this course for more than 9 years, and over this time I've developed a few strategies to help you to improve your experience in class.

- 1) **Skim your notes before and after each class.** If you only had 2 minutes to study each day, the absolute best way to spend it would be to read your notes just before class begins (so you will remember what I am talking about), and to read your notes at the end of class so you can fix them or fill in any gaps. This is my most important study tip.
  
- 2) **Don't get lulled into a false sense of security!** Much of the material in this course will be familiar to you, but you probably don't know it as well as you think you do! We all see the Sun come up every day, and we all feel the wind on our faces; but many popular explanations for these phenomena are wrong! You may have learned all about the environment in grade school, but this knowledge might not be good enough for college! The best way to know if you are prepared is to answer the questions at the end of the chapters and in my practice exams. You can stop studying once you get all of these questions correct!
  
- 3) **Match your class notes up with the Course Outline.** Some days you will take too many notes, some day not enough or not at all. To fix this inconsistency, go through your notes and compare them to the Course Outline. This will help you identify the important topics, and the not-so-important topics. You may even find that you are missing something!
  
- 4) **Write your own multiple choice questions.** Write two or three test questions for each chapter. It's difficult to write a good multiple choice question, and by doing it you will have a better idea of what I am likely to ask on the test.
  
- 5) **Start studying now, and don't stop until Mid-May!** The human mind can only take in so much information each day, and it tends to forget information that it doesn't use. My advice is to study a little each day instead of all at once. 'Cramming' the night before a test is useless. It might just be better to go to bed early and then hope for the best. Start studying weeks before each test, and just do a little each day. This keeps the material fresh in your head. And watch out for Spring Break! When you get back, it will be difficult to remember much of what you learned before the break.

## **Learning Tools**

Taken from: "The Course Syllabus" by Judith Grunert, 1997. Anker Publishing Company: Bolton, MA.

You, the student, are the center of the learning process. While your teacher can provide you with the guidance and materials that you need to succeed, it is your responsibility to set goals, plan your work, make notes from readings, lectures and discussions, and schedule the time you will need to complete assignments.

Developing good study skills can not only save you time and energy, but can also help you learn better, independently, and with less guesswork.

This section covers five effective study skills that will promote learning.

1. Self-management
2. Reading to learn
3. Making notes
4. Studying with others
5. Taking tests

### **1. SELF-MANAGEMENT**

Review the course syllabus and other course materials. Then consider what *you* want to accomplish in the course and what it will take to accomplish it. Once you have set attainable goals for yourself, plot out how to achieve them. Ask yourself, "What must I do to complete the course successfully? How much effort am I willing to put into the course? How can I make the best use of my time? What part of the day/week is best for me to study?" Also consider where you will study. Using an area that is free from distractions will increase your efficiency.

Consider how you will manage your time wisely. It is

helpful to organize a schedule, marking key dates on a weekly/monthly calendar. Schedule times for reading, making useful notes, working on projects, reviewing material, and studying for tests. You may need to renegotiate your schedule if certain activities take more or less time than you had anticipated.

Try to pace your work load evenly. Consider breaking large assignments into smaller segments. For example, if a course has several assignments that consist of several chapters or modules, don't try to do all the work in one session. Instead, break down the units into more manageable, readily digestible subunits. For longer papers (or other special projects) plan time to write first drafts, revisions, and final versions. Part of any good plan also includes a reward system. When you achieve a goal, reward yourself. Do something you would like to do. Include incentives when planning your course workload.

#### **Self-Management Techniques Include the Following:**

- Set learning goals.
- Plan and organize a schedule with ample time for reading, studying, reviewing, and studying for tests.
- Adjust your schedule as the course progresses.
- Break down work into manageable units.
- Pace the course workload evenly.
- Use a study location free of distractions.
- Review periodically.
- Set incentives or rewards for the completion of a section.

### **2. READING TO LEARN**

Reading to learn is a specialized form of reading that requires more effort than most other forms. Using the steps that follow will improve your understanding of the material you read.

### Read with a Purpose

Determine the purpose of your reading. Are you reading for the general idea, for the structure of an argument, for close scrutiny of detail, inference, and application? Adjust your speed and process accordingly.

### Scan the Text

Textbooks are divided and subdivided into units and chapters, each with their own titles and headings. First, read the introduction to the text and any summaries. Surveying the structure of the text will help you understand and organize the concepts you will be reading. This process also works for reading other types of course material.

### Preview for the General Idea

Preview the chapter to get a general idea of the material. Look at the headings, photos, maps, and tables. Before you begin to read the material, look over the glossary or key terms for new and already familiar concepts.

### Question the Text

Formulate *questions* about the text by changing each heading or title into a question. The headings should reflect the main ideas of the text. When you have completed a section, see if you can answer the questions. What new questions were raised?

### First Reading

Read the text, concentrating on the major ideas. You may want to underline or highlight them. At this point, however, focus on the major ideas, not the details.

### Reread to Check Understanding

At the end of each section, *summarize the* main ideas, then *restate the* concepts in your own words. If you are confused, go back and reread the part you don't fully understand. When you have finished reading, go back and make notes, margin notes, or underline key phrases in the book.

Other techniques that some students find useful are to visualize the information as you read it, relate it to something you already know, read out loud or think aloud, and discuss the reading with someone else.

### Review

Review the information in the text by rereading your notes, questions, and any exercises that have been assigned. Some other review techniques are to use index cards to review key terms, recite the information out loud, and explain the information to someone else.

### Reading Techniques Include the Following:

- Determine your purpose for reading.
- Preview the text (titles, maps, photos, summaries, intro).
- Read for main ideas.
- Turn titles and headings into questions.
- Summarize in your own words.
- Reread, visualize, relate, think aloud

## 3. MAKING USEFUL NOTES

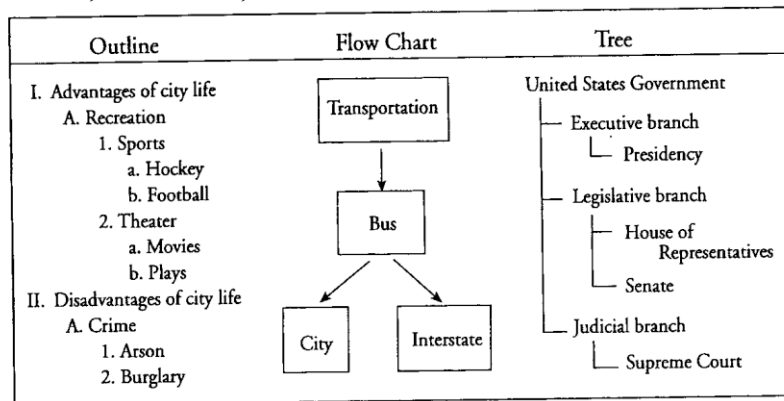
Making useful notes from readings and lectures is an important study skill that can help you learn and review information. A key word here is *useful*. Useful notes are those that are not only correct and accurate, but also help you to study for your course. A second key is the emphasis on *making* rather than taking notes. Your notes, written in your own

words, should reflect your decisions about what is important to know in course readings, lectures, labs, and discussions. To make your notes useful for learning, try the following:

- Prior to class: Complete assigned readings and make an organized set of notes. Include any questions raised by the readings.
- During class: Lectures generally blend your instructors' insights with materials from the readings. If you have completed the readings and written an organized set of notes, you should be able to take notes from the lecture selectively.
- After class: Rewrite notes to include new insights and questions raised.
- Periodically: Review and rewrite notes to clarify issues.

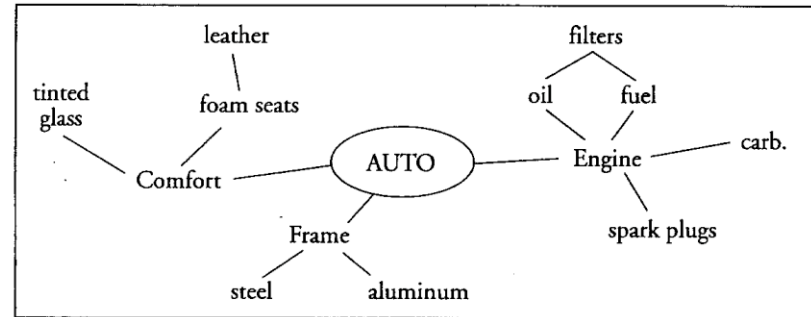
### Summarizing

After reading a section, it is helpful to summarize what you have just read in your own words. The act of writing this information helps you to remember it. Of course, the notes will be valuable later in reviewing for tests. Aside from writing paraphrased notes, you can also create graphic organizers like outlines, flowcharts, and trees.



### Concept Maps

Another method of making notes is connecting the different ideas into what is called a *concept map*. Start by placing the central idea in the middle of a piece of paper. Add related ideas and draw lines to them from the central idea. Each idea can be further subdivided. The lines represent the relationship between and among each of the ideas, so you can draw any number of lines and the map can have any shape.



### Underlining

In the section on reading a text, it was suggested that you underline the main ideas. It is not the actual underlining of the text that helps you learn, but the process of deciding which information is worth underlining. Avoid the common pitfall of underlining everything and anything. Be selective and underline only relevant information in short segments.

### Making Useful Notes Includes the Following Techniques:

- Identify main ideas.
- Summarize ideas or text.
- Create outlines, flowcharts, trees, concept maps.
- Underline selectively.
- Rewrite notes.

#### **4. STUDYING WITH OTHERS**

One of the best ways of learning is to study with someone else. Get to know one or more students enrolled in this course and work together. After a reading assignment, review the answers to any questions you have been given and discuss what you believe were the major points. Test each other on specific knowledge. If practice test items are available, go over them together before taking an exam. If not, formulate possible test questions, practice writing answers, and review them together.

Or try explaining what you are trying to learn to a friend who has never studied the subject. Your understanding of the material is clarified when you must present ideas so that others can understand them. Studying with others has been shown to be one of the most effective ways to study and learn.

#### **5. EXAMINATIONS AND TESTS**

Tests are designed to see how well you have learned. Try the following steps to improve your test-taking skills.

##### **Before the Test**

Reread the materials that will be covered on the test and ask yourself what the important points are.

- Look for the points emphasized in your syllabus.
- An "open book" test doesn't mean that you can disregard the reading. In an open-book test, the instructor is looking for how well you can demonstrate your understanding of the concepts. The exam will focus on how you support your position.
- Don't study differently for an objective test than you would for an essay test. Both formats incorporate the use of broad concepts as well as specific points.
- Try outlining the main points in your readings. It is often helpful to write out an answer to an essay question you think may be asked. Wait a day or two and then look at your answer to see if you are satisfied with it.

##### **Review for a Test by Using the Following Techniques:**

- Guess at possible questions and answer them.
- Compare the course outline with your syllabus and your reading. Whenever you find a subject that appears on all three, you know you have located an important issue and should look it over again.
- Review key terms from chapters and lectures.
- If you are working with formulas or operations, practice them several times.