

## PHYSICAL GEOGRAPHY-GEO-131-FALL 2013

Instructor: Steven Albee-Scott, Ph.D.

Office: JM111

Phone: 796-8568

E-mail: [albeescsteven@jccmi.edu](mailto:albeescsteven@jccmi.edu)

Required:

Text:           **Physical Geography: The Global Environment, 4E**; 2013. H. J. de Blij, Peter O. Muller, James E. Burt, and Joseph A. Mason; ISBN: 9780199859610

Lab:            GIS system Google Earth. Labs posted online.

### Course Description:

*The course begins with maps and grid systems. Map exercises are used all semester to enhance the textbook. Other topics include meteorology, vegetation, earth materials and a range of tectonic and landscape subjects.*

**Prerequisites: ENG 085\* and ENG 090\***

Students will develop a scientific skill-set to understand the four strands of scientific investigation, content, process, communication, and the nature of science. Students will use the critical thinking to evaluate scientific information, data, and current issues in physical geography. The foundation for physical geography will be constructed using the four strands of scientific investigation. The fundamental concepts in physical geography, like mapping, landform analysis, biogeography, and evolution are presented in context with current issues. The students will compare and contrast the content and process through communications with their peers and the instructor ultimately understanding the nature of science. The four strands will improve the student's scientific literacy which will support the enduring understanding of the building blocks of physical geography and biogeography. This course is designed for people interested in introductory science and geographical issues using their computational skills.

Upon completing this course students will retain a skill-set derived from critical thinking and physical geography methodology as it relates to spatiotemporal context. This skill-set can be used in classes following physical geography, and in problem solving needs through-out their lives. Although this course is an introductory class, introductory does not translate into easy. This course does not require background knowledge in physical geography. It will require effort to build the scientific foundation and the philosophical underpinnings of critical thinking and scientific thought. Students will have to spend time studying the material to succeed and there is a simple rule or algorithm for determining weekly studying habits. For this course, you should expect to study (credit hours) X (grade expectations). In other words, if you want to get a 3.0

out of this class, then you would study (3.0 credit hours) X (3.0 grade expectation) = 9 hours a week. You are responsible for the resulting grade that you shall receive.

### **Course Objectives:**

Upon completing this course I will be able to:

- ◆ Understand how the nature of science is a result of the content, process, and communication; and, how this process is self-correcting.
- ◆ Identify the big ideas in scientific discourse as they relate to physical geography.
- ◆ Integrate information of natural geological processes that govern the natural world.
- ◆ Understand the connection between landform, climate patterns, and the distribution of living organisms.
- ◆ Understand how the mechanisms of evolutionary change, geographic change, and climate change have on natural populations.
- ◆ Understand factors affecting global climate change and human impact on the environment as it relates to geography and living systems.

### **Associate Degree Outcomes:**

All JCC graduates should develop or enhance certain essential skills while enrolled in college, as defined by the Board of Trustees. The Associate Degree Outcomes addressed in this class are:

ADO 4: Scientific Reasoning. Students will be able to design and carry out valid experiments to assess a given hypothesis, and to draw appropriate conclusions based on the results.

ADO 7: Critical Thinking. Students will learn to critically analyze and interpret scientific data from scientific experiments.

**Incompletes** – Consistent with JCC policy, incompletes are granted with instructor permission only in situations where a student is **passing** the course after 90% completion of curriculum and encounters an unusual emergency that prevents them from completing coursework.

**Instructor Absence/School Closing** – If the college is closed due to inclement weather, announcements are made on local radio stations. The online distribution of physical geography is based on deadlines this policy does not apply unless you use computers on campus.

**Plagiarism and Cheating** – Be sure that **homework and any assignments are your own work**. Copying anyone else's work is **plagiarism**, and plagiarized work will **not be accepted**. Evidence of plagiarism or cheating on any exam or assignment will result in a "0" score for that assignment and notification of the Academic Dean - please see the JCC Academic Honesty Policy.

**Extra Credit** – is not given in the course. Focus your time and energy on completing course assignments and studying for lecture exams.

**Course Help and Special Needs** – if you have special needs that I should be aware of in order to help you to best learn course material, please let me know as soon as possible. Students requiring special assistance (including those affected by the Americans with Disabilities Act) should contact the **Center for Student Success** in **Bert Walker Hall, 796-8415**. Tutoring services are free at JCC - if at any point in the course you feel that you would benefit from a tutor, contact me and/or the CSS.

**Computer Resources** – reliable computer access is necessary for this course, as course materials can be accessed only through the course webpage. Simply type in the URL <http://jetnet.jccmi.edu/> and find the appropriate course.

**Grading Scale** – Grades will be rounded to the nearest percent. Grades may be curved at the instructor’s discretion.

<u>Percent</u>	<u>Grade</u>	<u>Percent</u>	<u>Grade</u>	<u>Percent</u>	<u>Grade</u>
90 - 100%	4.0	75 – 79 %	2.5	60 – 64 %	1.0
85 – 89 %	3.5	70 – 74 %	2.0	55 – 59 %	0.5
80 – 84 %	3.0	65 – 69 %	1.5		

**Student Responsibilities:**

**Attendance** – Attendance is tracked online through JetNet. Logging on is required to complete the course and is considered attendance, but **if you are not doing the required work, then you will be dropped from the course.**

**Keep Up With Homework and Discussion**– If you miss an assignment, it cannot be made up. A large portion of the points come from homework and discussion, and you have plenty of time throughout the week to complete the work. You cannot pass this course without doing the homework and discussions.

**Contribute to a courteous learning environment** – Our class time is valuable and science is a social exercise. Please stay engaged with your colleagues, they will determine how well you do on the discussions. Anyone who interferes with the learning of others through improper postings will be asked to leave class.

**Study** – The breadth of unfamiliar material makes physical geography a difficult course. Physical Geography will take significant study time outside of class. You will need to use the text and electronic resources, review notes and do study questions to prep for exams.

**Grading**– Lecture exams and homework account for 100% of the overall grade, and is described here. To determine your overall course grade at any point, use the following formula:

5 exams X 100 pts	=	500
Participation	=	140
8 discussion assignments X 10 pts.	=	80
<u>8 laboratory assignments X 10 pts.</u>	=	<u>80</u>
Total for class	=	700 pts.

**Exams** – There will be approximately five exams in the course, which may include multiple choice, fill-in, short answer, problem solving, and essay. All exams are posted online and have a time limit. **If you are required to take your exams using an alternative setting (ADA), then you are required to come into school or, find a local certified teacher or librarian to proctor the exams. Have that person email me their contact information.**

**Discussion** – I expect that the students in this class to have regular contact with each other throughout the semester. Please make sure that you put together a study group and you are discussing the homework and using our online discussion in JetNet.

### **Collaboration**

While JCC encourages students to collaborate in study groups and work teams each student should take responsibility for accurately representing his/her own contribution.

### **Consequences/Procedures**

A faculty member who suspects a student of academic dishonesty may penalize the student by taking appropriate action up to and including assigning a failing grade for the paper, project, report, exam or the course itself. Instructors should document instances of academic dishonesty in writing to the Dean of Faculty.

### **Student Appeal Process**

In the event of a dispute, both students and faculty should follow the Conflict Resolution Policy. The policy is presented in the Student Rights and Responsibilities section of the student handbook. **The first step of this process is to set up a scheduled conference with the instructor to discuss the issues of concern.**

### Tentative Schedule:

16 Sep- 22 Sep	Unit 1. Introducing Physical Geography	Portraying Earth-Discussion Lab 1
	Unit 2. The Planet Earth	
	Unit 3. Mapping the Earth's Surface	
	Unit 4. Earth-Sun Relationships	
23 Sep- 29 Sep	Unit 5. Radiation and the Heat Balance of Planet Earth	Weather Pattern-Discussion Lab 2
	Unit 6. Composition and Structure of the Atmosphere	
	Unit 7. Temperatures of the Lower Atmosphere	
	Unit 8. Air Pressure and Winds	<b>Exam 1</b>
	Unit 9. Circulation Patterns of the Atmosphere	
30 Sep- 6 Oct	Unit 10. Circulation of the World Ocean	Atmospheric Moisture-Discussion Lab 3
	Unit 11. Atmospheric Moisture and the Water Balance	
	Unit 12. Precipitation, Air Masses, and Fronts	
7 Oct- 13 Oct	Unit 13. Weather Systems	<b>Exam 2</b>
	Unit 14. Climate Classification and Regionalization	
	Unit 18. Natural Climate Change	
	Unit 19. Human Impacts on Climate	
14 Oct- 20 Oct	Unit 27. Planet Earth in Profile: The Layered Interior	Plate Volcanism-Discussion Lab 4
	Unit 30. Plates of the Lithosphere	
	Unit 31. Plate Movement: Causes and Effects	
21 Oct- 27 Oct	Unit 35. The Formation of Landforms and Landscapes	Landform Study-Discussion Lab 5
	Unit 36. Weathering Processes	
28 Oct- 3 Nov	Unit 39. Slopes and Streams	<b>Exam 3</b>
	Unit 41. Landforms of the Fluvial System	
4 Nov- 10 Nov	Unit 44. Landforms and Landscapes of Continental Glaciation	Glacial Modification of Terrain-Discussion Lab 6
	Unit 45. Landforms and Landscapes of Mountain Glaciers	
11 Nov- 17 Nov	Unit 20. Climate, Soil, Plants, and Animals	Soil Changes-Discussion Lab 7
	Unit 21. Formation of Soils	
18 Nov- 24 Nov	Unit 22. Properties of Soil	<b>Exam 4</b>
	Unit 23. Classification and Mapping of Soils	
25 Nov- 1 Dec	Unit 24. Biogeographic Processes	Cycles and Patterns in the Biosphere- Discussion Lab 8
	Unit 25. The Global Distribution of Plants	
	Unit 26. Zoogeography: Spatial Aspects of Animal Populations	
2 Dec- 8 Dec	Unit 50. Physiographic Realms and Regions: The Spatial Variation of Landscapes	<b>Exam 5</b>

**Important Dates\*\*\*:** Refer to the Deans' web page

**In order to participate in this course, I require you to submit a short blurb that you have read and understand the syllabus on JetNet, and agree to abide by all course policies. Please do so now under the Syllabus Acknowledge section of our class site on JetNet.**