

# Geography 3980: Biogeography – Spring, 2018

Class times: M, W 3:55-5:15 pm  
Classroom: Derby Hall, room 0070  
Instruction format: lecture

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## Course Description (from the official OSU Course Catalogue):

In this course we examine “the patterns and processes responsible for the global distribution of Earth's flora and fauna; the inter-relationship between biota and soils; climate and topography will be emphasized.”

## Course objectives

1. Become familiar with the wide range of concepts and theories that fall under the heading of biogeography. This will be achieved primarily through lectures delivered in class. We will begin with the concept of a specie's niche and the abiotic (soils, climate) and biotic factors (competition, predation, symbiosis, parasitism, etc) which determine it. We will then consider how evolution, working through time, allows species to adapt and develop to occupy these niches thus forming the communities, formations and biomes we observe today.
2. Gain familiarity with a few of the tools routinely used in obtaining and analyzing biogeographic data. This objective will be addressed through the homework assignments.
3. Further develop skills in oral presentation and in the analysis of scientific literature. This objective will be met through the student biome presentations and the peer-reviewed article presentations (see below).

## Required texts:

MacDonald, G. M., Biogeography: Space, Time and Life, 2003. This book should be available at the Gateway Barnes and Noble bookstore. Note that this book is also available in “used” condition online for considerably reduced price.

Quammen, David, The Song of the Dodo, 1996. Various extracts from this text will be assigned. The book is on reserve at the Main Library.

Various biogeographic journal articles, available on the course Carmen website.

## Student evaluation:

1. **Exams (36%).** There will 2 exams: a mid-term and an exam during finals week (see schedule for dates/times). The final exam will not be cumulative although a number of the concepts covered in the first part of the course will be relevant to material in the second part of the course. The exam format will be mixed and will likely include: matching, multiple choice, short answer and essay questions. The exams will be geared to material covered in class in lectures and student presentations (see below). The content of each exam will be discussed in detail in class during the schedule review sessions (see schedule below).
2. **Homework assignments (36%).** There will be 3 homework assignments, covering various aspects of the course, to be done individually. The assignments will be explained in detail in class as we approach them during the semester
3. **Biome presentation (10%).** Working in groups of 3, students will give presentations (20 minutes) to the class describing a biome chosen from among those found on chapter 6 of the course's text. Students are free to form groups (self-enroll in a group on Carmen); the biomes to be presented will be randomly assigned to each group. Evaluation will be based on the presentation, the ability of the group to respond to questions

from the audience and on the presentation material (such as slides and notes) which will be handed in to the instructor at the end of the presentation.

4. **Journal article presentation (12%).** Working in groups of 4, students will give presentations (20 minutes) to the class on one of the assigned journal articles. In addition, each group will hand in a 4 to 6 page report summarizing the article and placing it in the context of material covered in lectures. The report should have a cover and a reference page, leaving 2 - 3 pages for text and one (if desired) for figures. The text should be double spaced with font size 11 or 12. Students will self-enroll in groups on Carmen for the paper of their choice.
5. **Participation (6%).** I will take attendance on approximately half the days the class meets including all the days when student presentations are scheduled. 4 of the 6 percentage points for participation will be based solely on these attendance surveys. The final 2% will be based on my assessment of your participation in class activities: being active in group presentations and asking questions during lecture and during student presentations.

### **Attendance, late work, make-up exams, etc**

I expect you to attend all lectures and remain in the classroom for the duration of the lecture. Missing class will likely result in a reduction in participation points and poorer scores on exams.

Each homework assignment will be associated with a due date and time. Any assignment received after this time will be considered late. Late submissions incur an immediate reduction of 10% from the score of the assignment. This penalty increases 10% per additional day the assignment is late. So, for example, an assignment due in class on a Wednesday which is turned in at 9:00 am on Friday morning would suffer a 20% deduction.

Absences and late work will not be penalized in the case of excused absences. Excused absences include: participation in a scheduled activity of an official University organization, verifiable confining illness, verifiable family emergencies, subpoenas, jury duty, and military service. If you miss a presentation or homework assignment deadline for any of these reasons, you must provide me with verifiable documentation (a note from your University organization, a doctor's note, etc.). The documentation must include a name and a telephone number for someone who can explain your absence.

I concur with the statements on OSU's Student Health Service's website that most illnesses (colds, dizziness, headaches, nausea, etc) that keep students out of the classroom do not require an office visit or medical treatment. Instead, these conditions are typically best treated through self-care. In recognition of this, I will accept the Student Health Service's Absence Excuse Form, available at <https://shs.osu.edu/appointments/absence-excuse/> as the beginning of a dialog to determine whether an absence due to illness is to be excused.

If you miss an assignment deadline, and you can provide valid documentation, I will give you an extra 24 hours to hand in the assignment. After 24 hours, the original late penalty procedure is restarted.

If you miss a midterm exam or the final exam, and if you can provide valid documentation which explains your absence (as above), the make-up exam must be written within one week (seven days) of the originally scheduled exam. If you do not write the missed exam within the seven day grace period, you will receive no grade (i.e., 0%) for it. If you do not complete the final exam prior to the grade-posting deadline (this may be sooner than a week after the final exam), and if you have a valid excuse for having missed the exam, you will be awarded an "INC" grade which I will later change based on your final exam grade. Note for graduating seniors: an INC grade will likely delay graduation.

### **Class protocols (with thanks to Mat Coleman)**

This will be a rewarding and engaging class, but before we get started please read the following protocols which hold, without exception, for all enrolled students. These are designed to make your learning experience more enjoyable. I take teaching very seriously, and I would like you to take learning equally so.

1. The use of cell phones, smart phones and other mobile communication devices in class is disruptive to your colleagues' learning. The use of these devices is prohibited during class. Please turn off your devices before the class starts. If you use your mobile device or if your cell rings in class, I will ask you to leave the classroom for the remainder of the lecture period. There will be no exceptions to this rule.
2. If you are using a laptop, tablet or another portable computing device, my expectation is that you are using it to take notes. Using your portable devices for other reasons (surfing, email, videos) is a distraction for you, and more importantly, for your peers. If I detect that you are using your tablet and/or laptop for any of these other activities, I will ask you to leave the classroom for the remainder of the lecture period. There will be no exceptions to this rule.
3. I welcome your active participation during the lectures in the form of questions regarding the material at hand. It is my responsibility to ensure that students' participation in class is orderly and respectful. If your participation disrupts the class, or is not respectful to me or your peers, I will ask you to leave the classroom for the lecture period and to meet with me afterwards to discuss your enrollment in the class.
4. I will post a condensed version of the lecture slides for each class at the end of every week. This does not mean that you are free to miss class. I will present examples and details in class that will not appear on the lecture slides. If you miss a class, it is highly recommended that you get a full set of notes from one of your colleagues. The exams are designed explicitly for students who attend class regularly.

### **Academic misconduct**

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct <http://studentlife.osu.edu/csc/>.

### **Disability Services**

The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: [slds@osu.edu](mailto:slds@osu.edu); 614-292-3307; [slds.osu.edu](http://slds.osu.edu); 098 Baker Hall, 113 W. 12<sup>th</sup> Avenue.

### **Classroom environment: statements on sexual violence/harassment and diversity**

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at <http://titleix.osu.edu> or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at [titleix@osu.edu](mailto:titleix@osu.edu)

The Ohio State University affirms the importance and value of diversity in the student body. Our programs and curricula reflect our multicultural society and global economy and seek to provide opportunities for students to learn more about persons who are different from them. We are committed to maintaining a community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among each member of our community; and encourages each individual to strive to reach his or her own potential. Discrimination against any individual based upon protected status, which is defined as age, color, disability, gender identity or expression, national origin, race, religion, sex, sexual orientation, or veteran status, is prohibited.

## Tentative Course Schedule

Week	Day	Date	Topic	Activity	Readings	Out of class assignment	
1	Mon	8-Jan	Outline of course; Intro to biogeography		MacDonald, Ch 1		
	Wed	10-Jan	Abiotic factors		MacDonald, Ch 2, 3		
2	Mon	15-Jan	MLK Day - No Class!				
	Wed	17-Jan	Abiotic factors		MacDonald, Ch 2, 3		
3	Mon	22-Jan	Biological Interactions	Example paper discussion	MacDonald, Ch 4; Hanski, Henttonen 1991		
	Wed	24-Jan	Tour: Museum of Biodiversity				
4	Mon	29-Jan	Biological Interactions		MacDonald, Ch 4		
	Wed	31-Jan		Student led paper discussion #1 & #2	Savidge, 1987; Roughgarden, 1974; Quammen Ch 90-93		
5	Mon	5-Feb	Disturbance		MacDonald, Ch 5	Data analysis project assigned	
	Wed	7-Feb	Disturbance		MacDonald, Ch 5		
6	Mon	12-Feb	Communities and biomes		MacDonald, Ch 6		
	Wed	14-Feb					
7	Mon	19-Feb	Biome presentations			Data analysis project due	
	Wed	21-Feb		Review			
8	Mon	26-Feb		<b>Mid-term exam</b>			
	Wed	28-Feb		Student led paper discussion #3 & #4	Swetnam, 1993; turner et al, 1998		
	Sat	3-Mar	Tree Coring!!!!				
9	Mon	5-Mar		Core Prep			
	Wed	7-Mar		Core Prep			
10	Mon	12-Mar	Spring break - No Class!				
	Wed	14-Mar	Spring break - No Class!				
11	Mon	19-Mar	Paleobiogeography		MacDonald, Ch 7	Tree core project assigned	
	Wed	21-Mar	Paleobiogeography	Student led paper discussion #5 & #6	MacDonald, Ch 7; Gill, et al, 2009; Overpeck, et al, 1997		
12	Mon	26-Mar	Dispersal, Colonization, Invasion		MacDonald, Ch 8		
	Wed	28-Mar	Dispersal, Colonization, Invasion		MacDonald, Ch 8		
13	Mon	2-Apr	Evolution, Extinction, Speciation		MacDonald, Ch 9	Tree core project due	
	Wed	4-Apr	Evolution, Extinction, Speciation		MacDonald, Ch 9		
14	Mon	9-Apr	Biogeography and Human Evolution	Human biogeography project	MacDonald, Ch 11	Human biogeography project assigned	
	Wed	11-Apr	Biogeography and Human Evolution		MacDonald, Ch 11		
15	Mon	16-Apr	Geography of Biodiversity		MacDonald, Ch 14; Quammen, Ch 127-142		
	Wed	18-Apr	Biogeography and Conservation	Student led paper discussion #7 & #8	MacDonald, Ch 15; Diamond, 1975; Laurance et al 2011		
16	Mon	23-Apr	Review			Human biogeography project due	
17	Mon	30-Apr	<b>Final exam: 4:00-5:45 PM</b>				