BSC 5824 Biogeography

Fall 2017

Instructor: Dr. David G. Jenkins, BIO 111B, 823-1660, david.jenkins@ucf.edu
Web Page: http://sciences.ucf.edu/biology/d4lab/biogeography/
Text: Lomolino et al. Biogeography. 4th edition, Sinauer. ISBN 9780878934942
Shop at allbookstores.com
Other Readings: See below + Course Web Page for schedule and pdfs there
TurnItIn: Class ID: 16011291, pw = bluemarble

Course Description: Biogeography is the study of geographic variation in biota. Spatial scales considered range from local to global and require consideration of temporal scales ranging from seasonal to epochal. Organizational levels examined range from the gene to the biome. Biogeography is a field at the intersection of ecology and evolution: students are expected to be conversant in both fields for this course. Course structure will lean toward discussions of text chapters and readings.
Objectives for students include:

(a) master major concepts of biogeography
(b) understand the geological, evolutionary, and ecological processes that determine biogeographic patterns; and
(c) conceptually connect biogeography with conservation biology.

Course Prerequisites/Corequisites: A general ecology course and an evolution course are recommended. Prerequisites = graduate standing or consent of instructor.

Performance Evaluation:

Midterm	25.0 %
Discussion Leadership and Participation	25.0
Comprehensive Final Exam	25.0
Research Project Participation	25.0

Grade scale : A = [90-100], B = [80-89.9], C = [70-79.9], D = [60-69.9], F < 60

Midterms and Final Exam: There will be two take-home (open-book) exams: the midterm covers material of the first half of the semester (see schedule below). The final exam is comprehensive. Questions will require you to think, analyze information and apply what you have learned from lectures, discussions, the text and other readings in cogent answers. You will submit the exams electronically (Turnitin).

Discussion Leadership and Participation: Roughly ½ of the course time will be spent in structured discussions of readings. Dr. Jenkins will lead-off the semester to demonstrate what is intended for discussion leaders, followed by students who will lead remaining discussions. To lead a discussion is to to help others understand the concepts and evidence of subject readings. You will have at least two opportunities to lead discussion during the semester.

This course requires that you be familiar with ecological and evolutionary concepts and evidence to participate in advanced-level reading and discussions. In other words, before you read the text in advance of class each week, you may need to (a) read sections of intro-level ecology and evolution texts each week, and (b) conduct some literature searches and read to acquaint yourself with key journal articles. The success of this course (for you and others) depends on your active participation in discussions, and courtesy to others during discussions. Therefore, read a lot, think, be prepared, and be ready to talk and listen.

Research Project: You will participate in groups on a research project (think of this as the 1 credit "lab" component). Your group will describe WEEKLY progress. At the end of the semester, each group will present results of their research to the class and submit a report to Dr. Jenkins,

including all data and literature (pdf's) acquired. Participation will be assessed by Dr. Jenkins and using a standard survey tool completed by group members.

Your Responsibilities:

1. You will lead and participate in discussions, according to the schedule to be worked out. As a discussion leader, you are free to structure discussions in a format you think will work best (e.g., focus questions, teams, debates, etc.). **Be creative!** When you lead discussion, you must serve as the expert, with the goal of helping others to become experts on the subject. A big part of this to be a critical reader - ask questions of the paper, and be skeptical. This means you may have to do some extra reading (texts, journal articles), and be prepared to actively take charge. Feel free to consult with Dr. Jenkins in advance. Discussions that work well DO NOT address simple factual questions of Where? What? and Who? Discussions work best when we instead focus on higher-level questions of WHY? SO WHAT? DO YOU BUY IT? and WHAT'S NEW?
2. To participate fully, you need to be well-read, with notes and questions you wrote while reading. *You cannot read an hour before class and consider yourself prepared* - this is dense reading on difficult topics that are likely to require some background reading. Budget your time to read all week, do background reading, and think. Finally, participation means activity: just being there is not participating - come out of that shell! You cannot sit quietly in the background and expect to be counted as participating.

Other Business:

1. Attendance is important for your learning, but is not counted in your grade.
2. You are expected to abide by the UCF rules for student conduct [http://www.ucf.edu/goldenrule]
3. All reasonable accommodations will be made for disabilities documented through the Office of Student Disability Services (SRC 132; 407-823-2371).
4. The instructor reserves the option to adjust the rules, schedule, and grading system outlined in this syllabus as needed to maintain the best possible educational integrity of the course. Any such changes will be announced and a revised syllabus will be distributed.

TENTATIVE SCHEDULE (Subject to Changes)

Dates	**Topic (Chapters)**	**Other Readings**	**Discussion Leaders**
08/ 22, 24	Intro, Biogeo., History (1,2)		Jenkins
08/ 29, 31	History & Physical Setting (3)	Vanwalleghem et al. (2017)	Jenkins
09/ 5, 7	Species & Communities (4,5)	Ellis (2015)	Jenkins
09/ 12, 14	Dispersal (6)	Wilson et al. (2009), Capinha et al. (2015)	
09/ 19, 21	Speciation/Extinction (7)	Grant & Grant (1993), Dirzo et al. (2014), Ceballos et al. (2017)	
09/ 26, 28	Tectonics & Glaciation (8,9)	Reilly & Wake (2015), Kuchta et al. (2016), Hewitt (2000)	
10/ 3, 5	Glaciation (9)	Vazquez-Rivera & Currie (2015), Giampoudakis et al. (2017)	
10/ 10, 12	Diversification (10) **12th: EXAM 1 TO YOU**	Navarro-Sigüenza et al. (2017)	
10/ 17, 19	**19st: EXAM 1 DUE** Reconstructing Histories (11,12)	Riddle et al. (2000), Ornelas et al. (2013)	
10/ 24, 26	Island Biogeography I (13)	Gilbert (1980), Kalmar & Currie (2006)	
10/ 31, 11/2	Island Biogeography II (14)	Blackburn et al. (2016), Helmus et al. (2014)	
11/ 7, 9	Rules and Gradients (15)	Rosenzweig (1992), Hillebrand (2004)	
11/ 14, 16	Biodiversity (16)	Jackson et al. (2001), Bellard et al. (2012), McKinney (2006)	
11/ 21, **T'giving**	Conservation & Frontiers (17, 18)	**Thanksgiving**	**Thanksgiving**
11/ 28, 30	Group Reports **30th: EXAM 2 TO YOU**	Group Reports & Synthesis	Jenkins
12/ 5, 7	**7th: EXAM 2 DUE**	***Finals Week***	***Finals Week***