

BIOL 4000 - Biogeography**Spring 2017**

Instructor: Dr. Ann Kohlhaas

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Office hours: Mondays and Wednesdays 1:30 - 3 pm; and by appointment.

Lecture: MWF 11 – 11:50 am, N221

Textbook: Biogeography (5th ed.) by Lomolino, Riddle, and Whittaker

The following schedule is tentative and subject to change. Major changes are not expected. The indicated chapters are reference reading from the textbook.

<u>Date</u>	<u>Subjects</u>	<u>Chapter</u>
Jan 27	Introduction to Biogeography	1

Jan 30	History of Biogeography	2
Feb 1	Ecology – Basic Principles	3, 4
Feb 3	(cont.)	

Feb 6	Ecology – Biotic Factors	3, 4
Feb 8	Ecology – Abiotic Factors	3, 4
Feb 10	Geography of Natural Communities	5

Feb 13	Quiz 1 (50 pts.) + Historical Biogeography	
Feb 15	Historical Biogeography: introduction	8, 9
Feb 17	Plate Tectonics	8, 9

Feb 20	(cont.)	
Feb 22	Geological History	8, 9
Feb 24	(cont.)	

Feb 27	Quiz 2 (50 pts) + Speciation	
March 1	Speciation	7
March 3	Speciation (cont.)	

March 6	Extinction	7
March 8	Dispersal & Immigration	6
March 10	Dispersal (cont.)	

March 13	Quiz 3 (50 pts.) + Geography of Diversification	
March 15	Geography of Diversification	10
March 17	(cont.)	

March 20 - 24	SPRING BREAK	

March 27	(cont.)	
March 29	Reconstructing Histories	11, 12
March 31	NO CLASSES	

April 3	Quiz 4 (50 pts.) + Island Biogeography	
April 5	Island Biogeography - Basics	13
	(presentation topics due)	
April 7	Islands Biogeography – Equilibrium Theory	

April 10	(cont.)	
April 12	Islands Biogeography – Patterns & Processes	
April 14	(cont.)	

April 17	Quiz 5 (50 pts.) + Large Patterns	
April 19	Large Patterns in Diversity	14
April 21	(cont.)	

April 24	Applied Biogeography	15,16
April 26	(cont.) (last chance extra credit)	
April 28	Presentations	

May 1	Presentations	
May 3	Presentations	
May 5	Presentations	

May 8	Presentations	
May 10	Presentations	
May 12	Presentations	

May 15	Quiz 6 (50 pts.)	
May 17	Open Topic	

Friday, May 19, 11:15 am FINAL EXAM (50 pts.)

Objectives:

- learn the ecological, historical, and organismal processes that affect distributions
- examine patterns of diversity and the processes involved in those patterns
- examine the practical applications of biogeography
- review current literature in biogeography

Grading:

6 midterm quizzes (lowest dropped), 50 pts. each	250 pts.
1 presentation	50 pts.
<u>1 final exam, 50 pts.</u>	<u>50 pts.</u>
Total	350 pts.

Grades will be assigned on a percentage of the possible points earned, thus
A = 90+%; B = 80-89.5%; C = 70-79.5%; D = 60-69.5%; F < 60 %.

NOTE: there will be no “+” or “-” grades given. Also note that Credit/No Credit is not an option for this course.

Quizzes: Quizzes will be on material presented in lectures, student presentations, and readings from the textbook. Exam format may include essay questions, definitions, short answers, fill in the blanks, and multiple-choice. The final exam will be comprehensive.

**Note that your highest five quiz grades will be used in the calculation of your final grade. Quizzes will only be given as scheduled. There are no makeup quizzes. A quiz missed for any reason will automatically be the lowest and thus will be the dropped grade. There will be no deviation from this policy unless two or more quizzes are missed and all were for absolutely unavoidable, independently verifiable, and university-approved reasons (e.g. two hospitalizations!).

Final Exam: This will be comprehensive. Much of the exam is likely to come from the quizzes.

Alternative Grading: If you are satisfied with your grade average from all six quizzes plus the presentation (no dropped quizzes and without extra credit), then you can skip the final and take that average. If you miss the final for any reason, you will have this alternative grading. If you take the final, it will definitely count as listed above in “**Grading:**” and any extra credit will be added in.

Presentation (journal article):

The purposes of this presentation are to increase familiarity with scientific literature and to practice communications skills. This presentation will be on published refereed scientific paper in biogeography. Your presentation will be a 7-10 minute oral presentation of a recently published biogeography paper. Each presentation has two parts: an oral presentation and a written outline. (More information is given on a separate handout.)

The presentations must be on research papers (at least 6 pages long) published in scientific journals in 2016 or 2017. I suggest you look first in the journals, Journal of Biogeography, Diversity and Distributions, and Global Ecology and Biogeography. These are completely available to you online via our library. Articles from other journals will also be considered.

Two methods of searching for articles:

1) Look through recent journals to see what has been published.

www.csustan.edu → Library → Find Books & Articles → E Journals A-Z
→ type in journal name

2) Search by topic.

www.csustan.edu → Library → Find Books & Articles → Articles by Subject
→ Biological Sciences → choose a database

Note: You do not need to buy an article! There are literally hundreds, maybe even thousands, of appropriate articles available to you for free. If you cannot get a particular article online for free, I suggest you choose another article. You can also consider asking Interlibrary Loan if they can get you a particular article that is not available online.

→When you think you have a paper that you want to present, bring a pdf copy of the first title page.

Proposed presentation articles must be submitted to your instructor by April 5.

(Sooner is better and I will give priority of paper choice and scheduling to those who bring their requests earlier.)

NOTE:

- Late materials will be deducted 10 % points for each weekday late.
- Presentations that are not given as scheduled will lose 5 pts. per day late.

Extra Credit: You may earn up to 10 pts. extra credit. You must obtain prior approval for the work from your instructor and sign a liability waiver for any outside work. Examples of work that are likely to be approved include: helping with a conservation-related project at a park or refuge, helping with conservation-related research, or writing a 2-page abstract on a preapproved 2016 or later journal article. Note that any extra credit work is not a requirement for this course and that you must personally accept liability for your participation in any extra credit work. Also note, that any extra credit work must be approved by April 24 and will be due by May 5 at the beginning of class. No extra credit work will be approved after that time and final grades will be final.

Other:

- 1) The prerequisites for the course is completion of the freshman biology and chemistry sequences (or equivalent courses at another university/college) with grades of C- or better. If you have not completed this prerequisite, you need to drop the course or see me if you think you have other suitable coursework.
- 2) Cheating and other forms of academic dishonesty (ex. plagiarism) will result in an automatic grade of F in the course. Note that plagiarism is using another's words without acknowledging the source. It includes minor tweaking of sentences and near quotes. Thus, when you do your presentation and associated outline, be sure that you use your own wording. Some special phrasings must stay the same to retain meaning, but "lifting" of entire sentences or using entire paragraphs with just some minor rewording are both considered plagiarism!
- 3) Let me know if there is some reason why you need your cell phone on during class. Otherwise, cell phones should be **OFF** during class. This includes texting which is both rude and disruptive to your concentration and mine. Research has shown that "multitaskers" have decreased comprehension and accomplishment than "single taskers." When you are in class, be totally in class.
- 4) Audio and video recording of this class are not allowed. Let me know if you have some reason why you think you should have an exception to this.