Biogeography

Syllabus  
Biol. 582/782 (Lecture); 3 credit hr  
Fall 2007

LECTURES: 9:30–10:50 AM, TUES/THUR.  
PLACE: 320 Dyche

Instructor: Dr. Rafe Brown, e-mail: rafe@ku.edu  
417B, Dyche Hall; Phone: 864.3403 (O); Office Hr: Anytime, by appointment.

Sinauer.

Graduate Students Additional Text: M. V. Lomolino and L. R. Heaney (eds.). 2004. Frontiers of  
Biogeography, New Directions in the Geography of Nature. Sinauer.

Expectations

Reading assignments from class text (Lomolino, Riddle, and Brown, 3rd edition) and regular  
attendance in all scheduled lectures is required. Part of your grade will be determined by your  
regular participation in class, so active classroom interaction is a must for those who want to do  
well in this course. There are two midterm exams, a comprehensive final, and a term paper.  
Graduate students are required to read additional materials from Lomolino and Heaney (2004)  
and participate in separately scheduled discussions. Undergraduates are welcome and  
encouraged (but not required) to participate in these discussions as well.

Important Dates: see: http://www.registrar.ku.edu/calendar/079deadlines.shtml

*Note: it is your responsibility to be aware of all add-drop deadlines; please plan well in  
advance if you desire to drop the course or change your status to pass/fail.

Grades will be based on:

Exam 1 - 20 %  
Exam 2 - 25 %  
Exam 3 - 25%  
Prospectus - 5 %  
Term Paper - 20 %  
Participation - 5 %

Term Paper: Prospectus due: 14 November (or earlier)  
Final Term Paper Due: 14 December, 10 AM (NO LATE PAPERS)

Final Examination: Thursday, 13 December: 8:30 am (last 1/3 of course)
Lecture Schedule

16 August: Introduction and Orientation to the class.

21 August: The Science and History of Biogeography
Reading: LRB, Ch. 1+2

23 August: The Physical Environment
Reading: LRB, Ch. 3

28 August: The basics of Species Distributions
Reading: LRB, Ch. 4

30 August: Geography of Communities (Esp. Tropical Patterns)
Reading: LRB, Ch 5: p. 97–100; 106–138.

4 September: Plate Tectonics and Continental Drift
Readings: LRB, Ch. 8; see also: www.scotese.com
GRAD STUDENTS (LH Ch. 1)

6 September: Rafe away (IL); class cancelled (get started studying for Exam 1).

11 September: More continental drift
Readings: LRB, Ch. 8; see also: www.scotese.com
GRAD STUDENTS DISCUSSION 5 PM

Speciation and Extinction, Part 1
Reading: LRB, Ch. 7

13 September: Speciation and Extinction, Part 2
Reading: LRB, Ch. 7

13 September: 2nd half of class period: review session

18 September: Exam 1

20 September: Speciation and Extinction, Part 3
Readings: LRB, Ch. 7
GRAD STUDENTS (LH Ch. 4)

25 September: Glaciation and Biogeographic Dynamics of the Pleistocene.
Readings: LRB Ch.

27 September: The theory of Island Biogeography part 1
Readings: LRB Ch. 13; selections from MacArthur & Wilson, 1963

2 October: The theory of Island Biogeography part 2
    Readings: LRB Ch. 13 + 14; selections from MacArthur & Wilson, 1963

**GRAD STUDENT DISCUSSION 5 PM**

4 October: Island Biogeography part 3: assembly and evolution of insular communities
    Readings: LRB Ch. 14; selections from MacArthur & Wilson, 1963

9 October: Diversity Gradients
    Reading: LRB, Ch. 15

11 October: Class Cancelled — Fall Break (11–14 Oct.)

16 October: Measuring Dispersal
    Reading: LRB, Ch. 6

Catch up & review for Exam 2

18 October: Exam 2

23 October: The Geography of Diversification
    Reading: LRB, Ch. 10
    **GRAD STUDENTS (LH Ch. 9)**
    **GRAD STUDENT DISCUSSION 5 PM**

25 October: Historical Biogeography of Lineages
    Reading: LRB, Ch. 11, minus p. 404–408
    **GRAD STUDENTS (LH Ch. 11)**

30 October: Phylogeography Part 1
    Reading: LH, Ch 5 (graduate and undergraduates); LRB, “Phylogeography” p. 404–408

1 November: Phylogeography Part 2
    Reading: TBA

6 November: Historical & Vicariance Biogeography (biogeography of biotas)
    Reading: LRB, Ch 11 + 12
    **GRAD STUDENTS (LH Ch. 12)**

8 November: Rafe away (OK); lecture cancelled

13 November: More historical biogeography
Prospectus due in class
GRAD STUDENT DISCUSSION 5 PM

15 November: More historical biogeography: testing biogeographical hypotheses
   Reading Bossuyt & Milinkovitch “Out-of-India” Science paper

20 November: Lecture Cancelled to provide time to work on Term Paper.

22 November: Thanksgiving

27 November: Island Biogeography and Conservation, Part 1
   Reading: LRB, Ch. 16
   GRAD STUDENTS (LH Ch. 18)
   GRAD STUDENT DISCUSSION 5 PM

29 November: Island Biogeography and Conservation, Part 2
   Reading: LRB, Ch. 17

4 December: The Future of Biogeography: Pattern and Process in Biogeography,
   Reading: LRB, Ch. 18; extra readings TBA
   GRAD STUDENTS (extra readings TBA)

6 December; official last day of classes; & Class Evaluation

7 December: Stop Day

10 December — 14 December: FINALS WEEK

Final Exam Thursday, 13 December: 8:30 am (last 1/3 of course & first lecture-history)

21 December: grades finalized midnight

Term Paper:   Prospectus due: 13 November (or earlier)
   Final Term Paper Due: 13 December, 10 AM (NO LATE PAPERS)

The prospectus must include a 1-page outline or text summary and at least three primary references for your topic. Term papers may be on any topic in Biogeography that is approved by the instructor. They should be about 10 pages in length, in double-spaced, 12-point type. Papers should review some topic of interest from a conceptual point of view, i.e., there should be some issue or question involved, not just a summary of facts.