PGEOG 31300/70160 Biogeography  
Spring 2016  
Monday and Wednesday, 4:10-5:25 pm

Last class: 18 May 2016  
Final exam: 25 May 2016 3:00 – 5:00 pm

Tentative Syllabus

Lecturer: Peter J. Marcotullio  
Office: 1003E Hunter North  
Office hours: Monday and Wednesdays 3:00 – 4:00 pm  
Email: peter.marcotullio@hunter.cuny.edu  
Tel: 212-772-5264

Course description
This course is an introduction to the biogeography, the identification, description, interpretation and explanation of spatial patterns of biological diversity. Prerequisites include an introductory Physical Geography course (PGEOG 130, GEOL 105, GEOL 180, or GEOG 226). The course provides a basic, but comprehensive background in the subject at the global scale. Lectures emphasize the understanding and application of historic, geographic and ecological principles.

The course is based upon lectures provided by me, the instructor, class discussion and your presentations. All three of which are essential for understanding course material.

Learning outcomes
By the end of the semester, you will have an understanding of the theoretical foundations, history and patterns of animal and plant distribution, speciation, extinction, dispersal and immigration of biodiversity on Earth. During the course you will integrate geophysical history (i.e., plate tectonics, soil formation and climate change) with ecological processes (dispersion, immigration, speciation and extinction) in order to create a holistic understanding of life distribution patterns.

Specific learning outcomes include:

- Identify and describe the natural forces that have created the current spatial distribution of life on earth;
- Recognize species classifications using cladograms
- Describe and explain plant and animal speciation, extinction, dispersal and immigration
- Explain variation in historical distribution patterns of life across different regions of the earth
Required Books
There is one required book:


Course methods
This course is run as a lecture class. Each week material is presented based upon the readings. There are opportunities for in-class lab work. There will be four in-class labs including (but subject to change):

- Genetic speciation
- Cladograms
- Animal identification
- Plant identification

The class will be given on Mondays and Wednesdays from 4:10 - 5:25 pm. Most class reading assignments are from the textbook required for the course. Extra material may be provided as PDF files through Hunter Blackboard.

Assignments and grades
**Undergraduate student** evaluations are based upon:
1) Class attendance (I take attendance) and participation in class discussions. Please come to class prepared to discuss the readings (attendance and participation count for 10% of the final grade);
2) In-class labs (20% total or 5% a piece)
3) Individual project (30%) – Paper (2,500 words or GIS map and 1,000 words)
4) Two exams (class examines are 20% each)

**Graduate student** evaluations will include all the criteria mentioned above but graduate students must also
1) Submit individual projects based upon spatial analysis. Examples can be drawn from generic or specific instances. For example, final projects may identify and describe the relationship between biodiversity and urbanization spatially or describe the spatial distribution of earth worms in and around New York City. Spatial analysis includes the use of GIS software or statistical analyses. Reviews will not be accepted
2) Labs report from all in-class labs must be submitted in report format. Report format includes providing the following sections: Introduction, Background, Method, Results, Discussion and Conclusions. Reports should also include supplementary information provided from other sources.

Hunter College Statement on Academic Integrity
Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The College is
committed to enforcing CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures. Plagiarism, dishonesty, or cheating in any portion of the work required for this course will be punished to the full extent allowed according to Hunter College regulations.

**ADA Policy**
In compliance with the American Disability Act of 1990 (ADA) and with Section 504 of the Rehabilitation Act of 1973, Hunter College is committed to ensuring educational parity and accommodations for all students with documented disabilities and/or medical conditions. It is recommended that all students with documented disabilities (Emotional, Medical, Physical, and/or Learning) consult the Office of AccessABILITY, located in Room E1214B, to secure necessary academic accommodations. For further information and assistance, please call: (212) 772-4857 or (212) 650-3230.

**Essential class policies**
There are no incompletes given for the course with the exception of a proven medical emergency. No late exams are accepted. You will receive a grade of “0” on any exam not taken if they do not have a documented medical excuse for missing the exam. I take attendance as I believe that class participation is an important part of your grades. If you email me during the week, you can expect a return email within 36 hours. I may not answer during the weekends. Please do not bring iPods or earphones to class and do not use your cell phones or laptop computers except to take notes. Please do not bring food to class.

**Syllabus change policy**
Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice. Any changes to the syllabus will be posted on Blackboard as well as discussed in class.

**Course Schedule**
The course will follow the textbook as outlined by the chapter plan below. Each chapter will be covered by 1-2 lectures.

**Introduction**
Week of 1 Feb: Introduction,
Ch 1 The science of biogeography
Ch 2 The history of biogeography

**The geographic and ecological foundations of biogeography**
Week of 8 Feb: Ch 3 The geographic template
Week of 15 Feb: In-class video
Week of 22 Feb: Ch 4 Distribution of species
In-class lab 1
Week of 29 Feb: Ch 5 Distributions of communities

**Fundamental biogeographic processes and Earth history**
Week of 7 March: Ch 6 Dispersal and immigration
Week of 14 March: Ch 7 Speciation and extinction
**First exam, chapters 1-7**

Week of 21 March:  Ch 8 The changing Earth

*In-class lab 2*

Week of 28 March:  Ch 9 Glaciations and biogeographic dynamics of the Pleistocene

*Evolutionary history of lineages and biotas*

Week of 4 April:  Ch 10 The geography of diversification

Week of 11 April:  Ch 11 Reconstructing the history of lineages

*In-class lab 3*

Week of 18 April:  Ch 12 Reconstructing the history of biotas

*Ecological biogeography*

Week of 2 May:  Ch 13 Island biogeography: Patterns in species richness

*In-class lab 4*

Week of 9 May:  Ch 14 Island biogeography: Assembly and evolution of insular biotas

*Conservation of Biodiversity*

Week of 16 May:  Ch 16 Conservation biogeography and the dynamic geography of humanity

25 May Final exam, chapters 8-16, 3:00 PM to 5:00 PM