

PRINCIPLES OF BIOGEOGRAPHY, GEOG3104/BIOL3608

Carleton University
Department of Geography & Environmental Studies
Fall 2019

Kevin Hamdan, Ph.D.
Office: Loeb A301B
Kevin.Hamdan@carleton.ca

Office Hours: Tuesday (1:00pm-2:00pm) or by appointment

INTRODUCTION

The course introduces you to the study of **biogeography**, an important sub-discipline of Physical Geography and environmental science/studies. **Biogeography** is the study of the distribution and dynamics of organisms, their environments, and the influential processes. The objectives of the course are to give you an overview of biogeography, to introduce and illustrate major concepts, and to prepare you for more advanced courses in this subject. The topics in this course are important to students interested in the biophysical sciences and to students who wish to understand the processes underlying many human, social and economic aspects of our environment and natural resources.

COURSE PREREQUISITE: GEOG1010 OR BIOL2600 OR permission of the Department.

COURSE FORMAT

Lectures will follow the attached course outline. The lectures will introduce and illustrate the major concepts in biogeography. Support material will be available on the cuLearn course site.

SCHEDULE

Lectures: Thursday 2:35pm- 4:25pm, classroom: Tory Building 240

Lab sessions: - section A01: Wednesday 2:35pm-4:25pm, Room: Loeb building Tower A Room 410
- section A02: Monday 12:35pm-2:25pm, Room: Loeb building Tower A Room 410

Note the labs will run in the following order: A02→A01

COURSE TEACHNG ASSISTANT

Check cuLearn for TA contact information and office hours.

RECOMMENDED TEXTBOOK

“MacDonald, G. M. 2003. Biogeography: Introduction to Space, Time and Life. John Wiley & Sons”.

Suggested further reading:

If you would like different perspectives, explanations and examples or you are very interested in more biogeography, then please consult these books (on reserve):

Lomolino, MV, BR Riddle, RJ Whittaker, JH Brown. 2010. Biogeography 4th edition. Sinauer Associates, Inc.

Cox, C. Barry; Moore, Peter D. 2005. Biogeography: an ecological and evolutionary approach. Blackwell Pub.

Ganderton, Paul S; Coker, Paddy. 2005. Environmental biogeography. Pearson/Prentice Hall.

A copy of the course textbook will be held on four-hour reserve in the library along with the other supplementary textbooks. There are many other worthwhile biogeography books and journals in the library.

STUDENT RESOURCES AND COMMUNICATION

Office Hours, Email and Appointments

If you have questions pertaining to lecture materials, I encourage you to come to my office hours or to meet me at the end of class to make an appointment.

All questions about missed assignments, missed exams, and other practical concerns about the course should be directed to me by email. Emails will be responded to during business hours only. Please place the course number GEOG3104/BIOL3608 in the subject line. Private correspondence with the Instructor and Teaching Assistants should be through a Carleton email account (this is accessible in cuLearn).

cuLearn Course Site

The cuLearn course site of GEOG3104/BIOL3608 contains information on all aspects of the course. It includes partial outlines of lectures (not complete notes) and graphs or diagrams presented in class. You need to supplement these notes by attending the class lectures or by referring to the textbook. If you have questions of a general nature, please post it to the “Ask the Instructor” discussion board in cuLearn so that others can benefit from the answers. You will be able to access cuLearn course site and to download files on the first week of classes. If you are not able to login, please contact the course instructor.

EVALUATION

Final marks in the course are based on your performance in five categories as follows:

Participation	5%
Midterm Exam	20%
Lab Assignments/Exercises	20%
Term Paper	25%
Final Exam	30%

Participation

Students are expected to attend classes and to discuss the materials for each topic. Your attendance, asking questions, participation in class discussions, and timely submission of assignments will count towards your participation mark. Students who miss more than 4 classes without a medical note will forfeit their participation mark. A student who is consistently late for classes will be marked as absent.

Assignments

There are a total of 6 assignments due in the course that are worth 20% of your final grade. These are meant to complement the course material and to facilitate application and integration of knowledge gained from lectures and readings. The lab exercises will be posted on cuLearn at least one day ahead of their corresponding lab session. Please feel free to collaborate with others during the lab sessions to obtain common data, but please submit your own individually-written lab reports that contain your own analyses and answers to questions. Discussions (in the lab sessions or otherwise) are for gaining guidance and clarity on a topic. Students sharing/posting answers would be in breach of the Academic Integrity Policy (see below).

Term paper

The term paper will provide students an opportunity to explore the biogeography of a plant or animal species native to Ontario. Students will conduct a literature review; and will organize findings in a

coherent paper. You should e-mail your TA your term paper topic by **Oct. 9th** 11:59 pm. Submit the Term Paper by **Dec. 4nd** 11:59pm. Note that you will submit your term paper in digital form by uploading it to the cuLearn.

Exams

Exams will cover lecture and lab materials. Only students who have made prior arrangements with the instructor, or students who have contacted the instructor within 5 days of the missed midterm exam with a valid doctor's note explaining why they missed the exam will be permitted to write the make-up exam. The final exam is not cumulative, it will only cover materials discussed after the midterm.

COURSE POLICIES

Late Assignments

Late assignments will be penalized by subtracting 10% per day (including Saturday and Sunday) of the total value of the assignment. Students whose assignments are late because of a valid medical reason or family emergency will not be penalized, however, documentation from a family physician or counseling services will be required. If you are not able to hand your assignment directly to the Instructor or TA, you may email a copy of your work to demonstrate you have completed it on time (before the due date) and provide a hard copy (for marking) as soon as possible after that. Every student will be able to hand in any one assignment up to 12 hours late without penalty. Note that material handed-in via the departmental drop box will not be accepted, unless you make prior arrangements with the instructor or TA.

Missed Assignments or Exams

Students who fail to submit an assignment or write the midterm exam will receive an automatic grade of zero. The only exceptions will be for instances of significant illness or a family emergency. Students who are not able to write the final exam during the exam period must consult with *Exam Services* as soon as they are aware that they will miss the test.

Standards of Written Work

Any assignment submitted should be printed using *word processing software* and checked for spelling and grammar. The overall presentation quality of the assignments will be reflected in your grade.

ACADEMIC INTEGRITY

Academic integrity is a necessary foundation for all meaningful scholarly activity and verified instances of intellectual dishonesty will be dealt with in full accordance with the procedures laid out in Academic Integrity Policy. Additional information regarding what constitutes plagiarism may be found on Carleton University web site: <https://carleton.ca/secretariat/wp-content/uploads/Academic-Integrity-Policy.pdf>

The University Senate defines plagiarism as “presenting, whether intentionally or not, the ideas, expression of ideas or work of others as one’s own.” This can include:

- reproducing or paraphrasing portions of someone else’s published or unpublished material, regardless of the source, and presenting these as one’s own without proper citation or reference to the original source;
- submitting a take-home examination, essay, laboratory report or other assignment written, in whole or in part, by someone else;

- using ideas or direct, verbatim quotations, or paraphrased material, concepts, or ideas without appropriate acknowledgment in any academic assignment;
- using another's data or research findings;
- failing to acknowledge sources through the use of proper citations when using another's works and/or failing to use quotation marks;
- handing in "substantially the same piece of work for academic credit more than once without prior written permission of the course instructor in which the submission occurs."

Plagiarism is a serious offence which cannot be resolved directly with the course's instructor. The Associate Dean of the Faculty conducts a rigorous investigation, including an interview with the student, when an instructor suspects a piece of work has been plagiarized. Penalties are not trivial. They can include a final grade of "F" for the course.

ACADEMIC ACCOMMODATION

You may need special arrangements to meet your academic obligations during the term. For an accommodation request the processes are as follows:

Pregnancy obligation: write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details visit the Equity Services website: <http://www.carleton.ca/equity/>

Religious obligation: write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details visit the Equity Services website: <http://www.carleton.ca/equity/>

Academic Accommodations for Students with Disabilities: The **Paul Menton Centre** for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send me your **Letter of Accommodation** at the beginning of the term, and no later than two weeks before the first in-class scheduled test or exam requiring accommodation (*if applicable*). After requesting accommodation from PMC, meet with me to ensure accommodation arrangements are made. Please consult the PMC website for the deadline to request accommodations for the formally-scheduled exam (*if applicable*) at <http://www.carleton.ca/pmc/new-and-current-students/dates-and-deadlines/> You can visit the Equity Services website to view the policies and to obtain more detailed information on academic accommodation at <http://www.carleton.ca/equity/>

Students representing Carleton University, Ontario or Canada (at academic or sports events): I fully support students involved with organizations and teams that travel during the semester; however, with this privilege comes additional responsibility. You are responsible for providing formal documentation identifying the organization you represent and potential schedule conflicts with this course. In the event that you are travelling and unable to attend an exam, you must schedule a secondary exam before you depart. Without proper documentation, a missed exam will earn zero points.

HINTS FOR SUCCESS

It is in your best interest to attend class regularly and to participate in class. Try to keep up with your readings and address questions you have on the subject matter at the appropriate time rather than waiting until just before the midterm and final for clarification.

This course moves quickly through a large amount of material in a short time. Try to keep up with your readings and address questions you have on the subject matter at the appropriate time rather than waiting until just before the midterm and final for clarification.

IMPORTANT DATES

Oct. 9	e-mail the TA your term paper species
Oct. 17	Midterm exam
Dec. 4	Submit your term paper as Word document. You will submit it by uploading it to cuLearn term paper dropbox
Dec.	Final exam (Room: TBA)

PRINCIPLES OF BIOGEOGRAPHY (GEOG3104/BIOL3608)
Fall term 2019 Course Outline

Week	Lecture	Lab	Readings
Sept. 4-5	Introduction to course Introduction to biogeography	<i>NO LAB</i>	Ch. 1+ Ch. 2
Sept. 9-12	Introduction to biogeography (cont'd) Environmental control: climate	Lab exercise 1: Morphology and Variation	Ch. 1+ Ch. 2 Ch. 3 (45-60)
Sept. 16-19	Environmental control: climate (cont'd) Environmental control: soil	Lab exercise 1: Morphology and Variation (cont'd). <i>Lab exercise 1 is due at the end of the lab period.</i>	Ch. 3 (45-60) Ch.3 (60-69)
Sept. 23-26	Environmental control: soil (cont'd)	Lab exercise 2: Field Mapping	Ch.3 (60-69)
Sept. 3-Oct. 3	Niches, communities, and biomes	Lab exercise 3: Climate and range <i>Lab exercise 2 is due at the beginning of the lab period.</i>	Ch.3 (70-73) + Ch.4 (133-145)
Oct. 7-10	Disturbance and succession OCT.9: email the TA your term paper species	Lab exercise 3: Climate and range (cont'd). <i>Lab exercise 3 is due at the end of the lab period.</i>	Ch.5
Oct. 14-17	OCT. 17: Midterm Exam in our regular classroom	<i>NO LAB-Midterm week</i>	Ch.5
Oct. 21-24	NO CLASS-FALL BREAK	NO LAB-FALL BREAK	
Oct. 28-31	Biogeographic range Speciation	Lab exercise 4: Forest succession	Ch. 10 + Ch. 13 (377-393)
Nov. 4-7	Dispersal, colonization, and invasion	Lab exercise 5: Tertiary range and migrations <i>Lab exercise 4 is due at the beginning of the lab period.</i>	Ch.7 (191-205) Ch. 8 + Ch. 13 (394-404)
Nov. 11-14	Island biogeography	Lab exercise 6: Late Quaternary range and migrations. <i>Lab exercise 5 is due at the beginning of the lab period.</i>	Ch. 14 (428-450)
Nov. 18-21	Cultural biogeography	Q&A session related to Term Paper. <i>Lab exercise 6 is due at the beginning of the lab period.</i>	Ch. 12
Nov. 25-28	Biodiversity and conservation	<i>NO LAB</i>	Ch. 14 (406-428)
Dec. 2-5	NO CLASS DEC. 4: DEADLINE FOR TERM PAPER SUBMISSION (25%)	<i>NO LAB</i>	
Dec.	FINAL EXAM (TBA)		