

GEOG 2320A – Introductory Biogeography

Course Outline: Section 001 – Fall 2018

1. Course Information

1.1. Classroom Location:

Class Location and Time:

Lecture: SSC 3028 on Thursdays 9:30-11:30am

Tutorial: SSC 3014 on Thursdays 1:30-2:30pm

1.2. Contact Information:

Instructor: Dr. Gabor Sass

Office: SSC 2221

Office Hours: Thursdays 12-1pm (or by appointment)

Phone: 661-2111 x82829

Email: gabor.sass@uwo.ca

2. Calendar Description

2.1. Course Description

Spatial distributions of plants and animals; evolutionary and environmental controls on distributions; impacts of human settlement. 2 lecture hours, 1 laboratory hour, 0.5 course

Antirequisite(s): none

Prerequisite(s): 1.0 course from Geography 1100, Geography 1300A/B, Geography 1400F/G, Geography 1500F/G, Geography 2131A/B, Geography 2153A/B, Environmental Science 1021F/G; or enrolment in the Major in Physical Geography

Prerequisite checking is the student's responsibility

2.2. Senate Regulations

Senate Regulations state, "unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you will be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites."

3. Textbook and Electronic Devices

3.1. Required text:

Lomolino, M.V., B.R. Riddle, & R.J. Whittaker. 2016. Biogeography. 5th edition. ISBN 978-1605354729 (Available as 1-day loan at Taylor Library [TAY QH84.B76 2017]).

3.2. Recommend texts:

Cox, C.B. & P.D. Moore. 2005. *Biogeography: an ecological and evolutionary Approach* (QH84.C65 2005).

Flannery, T. 1994. *The Future Eaters: an ecological history of the Australasian lands and people*, Grove Press.

Lomolino, M.V. & L.R. Heaney (eds.). 2004. *Frontiers of Biogeography. New Directions in the Geography of Nature*, Sinauer Associates. (QH84.F76 2004)

Lomolino, M.V., D. F. Sax, & J.H. Brown (eds.). 2004. *Foundations of Biogeography. Classic papers with commentaries*, University of Chicago Press. (QH84.F68 2004)

Quammen, D. 1997. *The Song of the Dodo: Island Biogeography in an Age of Extinction*, Pimlico. (QH541.5.I8Q35 1996)

Lecture notes and other additional material will be placed on OWL Sakai in a timely fashion, available for downloading.

3.3. iClicker Application

This course requires that you have and bring an electronic device that can connect to the internet to class. You will use this device to download the iClicker app for activities such as attendance checking and answering questions assigned during class time. To download the app visit: <https://www.iclicker.com/>

Please note: this software is *free* for all Western students

4. Course Objectives

The objective of Geography 2320 will be to examine how the distribution and nature of plants and animals vary over the surface of the Earth and how we can account for this variation. An important part of the course will be a discussion of The Theory of Island Biogeography, how this theory can be used to understand problems faced by animals and plants in today's human-dominated landscapes, and what can be done to alleviate and hopefully solve these problems.

Specifically, the following topics will be addressed:

- historical and environmental controls on distributions of plants and animals;
- the Theory of Island Biogeography and its application to real-world problems;
- impacts of human activities on other organisms;
- conservation and restoration.

5. Learning Outcomes

- You will gain knowledge about the fundamental characteristics of, and processes operating in, biophysical systems.
- You will gain knowledge about the interactions between biophysical and human landscapes and environments.
- You will gain knowledge about geographical and environmental change across a range of spatial and temporal scales.

- At the end of Geography 2320, you should be able to identify, analyze, and interpret some spatial patterns and relationships within natural systems.
- By completing the research assignment, you should improve your skills in independent research and written communication.

6. Evaluation

Evaluation Components	Percentage of Course Grade	Assignment Schedule
Attendance & Participation	10%	Weekly
Tutorial assignments	16%	Weekly
Research assignment – annotated bibliography and research summary	24%	Part 1 – Nov. 1 Part 2 – Dec 6
Mid-term exam	20%	October 18 – in class
Final exam	30%	TBA

Participation is a fundamental part of the learning environment. You will need to be present in all lectures and tutorials as well as be ready to participate actively in the communal learning. There will be lots of emphasis on active learning and critical thinking. Students will get the most out of lectures by reading the material ahead of time. An individual attendance and participation grade will be awarded based on your attendance, readiness, and discussion during class activities. (10%)

The tutorials will be used for guest lectures, exercises, films, discussion and exam reviews. Each week there will be an individual tutorial assignment due. The objective of the tutorial assignments is to test your general understanding of the materials covered in tutorial (and in class) as well as to develop your graphing, critical thinking & analysis skills on various biogeographic topics. There will be 10 assignments each worth between 10-16 marks. The lowest two marks will be dropped and an average grade computed by equally weighing the top 8 assignments. (16%)

In mid-September you will be asked to choose a topic to research for the individual research assignment. You will then hand in a preliminary bibliography with key citations for your research topic (due November 1st). You must include a statement of your research topic (what you are going to look at and why) with this preliminary reference list – this preliminary bibliography will then be marked and approved. The final research assignment will include a properly-referenced list of the sources you used (10 academic papers, 2 academic books, and 3 websites), an annotated bibliography of the references used for the research and a 5-page synopsis of what you learned. It will be due during the last tutorial in the course (December 6th) and will be worth 24%. I will be happy to go over your assignment with you at any stage of preparation.

There will be one two-hour mid-term exam (20%) and a final examination (30%) in Geography 2320. The mid-term will be held on October 18th in class. The final examination (3 hours) will be scheduled by the Registrar during the December examination period. The examinations will

include questions from material covered in lectures, discussions, assigned readings, tutorial exercises and films. The final examination will include material from the entire term. The format of the examinations will be a combination of multiple choice, short and long answer type questions. No electronic devices (e.g. laptop computers, cell phones, etc.) will be allowed during an examination.

Topics covered:

Date	Topic	Readings
Sept 6	Introduction to the course; What is Biogeography?	Chapter 1 (3-11), Chapter 2 (13-38)
Tutorial	Film and discussion: Darwin's Struggle: The Evolution of the Origin of Species	
Sept 13	Ecological Foundation: The Geographic Template	Chapter 3 (41-59)
Tutorial	Film and discussion: Planet Earth – Pole to Pole	
Sept 20	Ecological Foundations: Distributions of Species	Chapter 4 (71-100)
Tutorial	Exercise: Coyote removal in Texas	
Sept 27	Ecological Foundations: Distributions of Communities	Chapter 5 (101-112)
Tutorial	Walk along Medway creek: The eastern deciduous forest biome	
Oct 4	Ecological Foundations: Biomes	Chapter 5 (113-139)
Tutorial	Exercise: Biomes and their biodiversity	
Oct 11	Reading Week (no class)	
Oct 18	Mid-Term Exam in class (2 hr)	Chapters 1-5
Tutorial	Help with research project	
Oct 25	Fundamental Biogeographic Processes: Dispersal and Immigration	Chapter 6 (143-176)
Tutorial	Film and discussion: Kakapo	
Nov 1	Fundamental Biogeographic Processes: Speciation and Extinction	Chapter 7 (177-220)
Tutorial	Exercise: Evolution and Galapagos	Due: Part 1 of research assignment
Nov 8	Fundamental Biogeographic Processes: The Changing Earth (Plate Tectonics and Climate Change)	Chapters 8 & 9
Tutorial	Visiting Biogeographer: TBA	
Nov 15	Island Biogeography	Chapter 13

Date	Topic	Readings
Tutorial	Exercise: Do corridors have value?	
Nov 22	Conservation Biogeography	Chapter 15 (605-633)
Tutorial	Exercise: Caribou Conservation Conundrum	
Nov 29	Restoration Biogeography	Markwith (2011); Fei et al. (2012)
Tutorial	Exercise: Restoring wetlands	
Dec 6	Cultural Biogeography	Chapter 15 (589-605); Pretty et al. (2009)
Tutorial	Final exam review	Due: Part 2 of research assignment

Students are responsible for material covered in the lectures as well as the assigned chapters/sections in the text.

With the exception of documented illness or family death (see below), late assignments will be penalized at the rate of 10% per day of lateness. Upon presentation of legitimate documentation, a student can hand in the assignment within 2 weeks without late penalty or the mark value for the assignment will be added to the mid-term and final examinations in an equitable manner. Missed exams will result in a grade of zero unless academic accommodation is approved by Academic Counselling (see below).

Missed exams, tutorials, and assignment due dates because of illness or family death:

For Western's Policy on Accommodation for Medical Illness and a downloadable SMC please refer to the [Academic Handbook](#).

Students seeking academic accommodation on medical grounds for any missed tests, exams, participation components and/or assignments worth 10% or more of their final grade must apply to the Academic Counselling office of their home Faculty and provide documentation. Academic accommodation cannot be granted by the instructor or department.

Grades will not be adjusted on the basis of need. It is important to monitor your performance in the course. Remember: *You* are responsible for your grades in this course.

7. Make-up Examinations

Makeups will be granted with approved documentation only. All documentation for missed exams must be provided the Academic Counselling Office and Instructor within 48 hours of the scheduled exam. For missed exams, you must take your documentation to Academic Counselling within 48 hours of the exam. Otherwise, the instructor will assign a grade of zero. The format and content of make-ups may differ substantially from the scheduled test or examination

8. Use of Electronic Devices

No electronic devices will be allowed during tests and examinations.

Internet enabled devices are allowed during lecture but their use should be limited to signing the *iclicker* attendance, answering *iclicker* questions, taking notes, using an internet search engine during small group work and any other instructor assigned online work

9. Academic Offences

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following web site: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf.

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).

10. Western's Commitment to Accessibility

The Department of Geography strives at all times to provide accessibility to all faculty, staff, students and visitors in a way that respects the dignity and independence of people with disabilities.

Please contact the course instructor if you require material in an alternate format or if you require any other arrangements to make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 519-661-2147 for any specific question regarding an accommodation. Information regarding accommodation of exams is available on the Registrar's website: www.registrar.uwo.ca/examinations/accommodated_exams.html

More information about "Accessibility at Western" is available at: <http://accessibility.uwo.ca>

11. Medical Issues

The University recognizes that a student's ability to meet his/her academic responsibilities may, on occasion, be impaired by medical illness. Please go to:

https://studentservices.uwo.ca/secure/medical_accommodations_link_for_OOR.pdf to read about the University's policy on medical accommodation. This site provides links the necessary forms. In the event of illness, you should contact Academic Counselling as soon as possible. The Academic Counsellors will determine, in consultation with the student, whether or not accommodation should be requested. They will subsequently contact the instructors in the relevant courses about the accommodation. Once the instructor has made a decision about whether to grant an accommodation, the student should contact his/her instructors to determine a new due date for tests, assignments, and exams.

Students must see the Academic Counsellor and submit all required documentation in order to

be approved for certain accommodation:

http://counselling.ssc.uwo.ca/procedures/medical_accommodation.html

12. Mental Health

If you or someone you know is experiencing distress, there are several resources here at Western to assist you. Please visit the site below for more information on mental health resources: <http://www.uwo.ca/uwocom/mentalhealth/>.

13. Support Services

Student Support Services can be reached at: <http://westernusc.ca/services/>

Student Development Services can be reached at: <http://www.sdc.uwo.ca/>

14. Important Dates

September 6: Classes resume

September 14: Last day to add a full course or a second term half course

October 8: Thanksgiving Holiday – Department Office Closed

October 9-23: Fall Reading Week (No classes; Department Office open

November 12: Last day to drop a first term half course without penalty

November 30: Last day to drop a full course without academic penalty

December 7: Classes end

December 8 and 9: Study days

December 10-21: Examination Period

December 21: Fall term ends