

38:276: Introduction to Biogeography
Fall Semester 2016/17

BRANDON UNIVERSITY
DEPARTMENT OF GEOGRAPHY

38:276
INTRODUCTION TO BIOGEOGRAPHY

Instructor: Dr. C. Malcolm
Office: BB 4-05
Phone: 727-9770
Office Hours: Mon., Wed., & Fri. 9:30 AM to 10:20 AM (or drop in)
Lectures: Mon., Wed. & Fri. @ 12:40 PM to 1:30 PM in BB 3-42 (Slot 5)
Lab: Wed. 1:40 PM to 4:30 PM (some labs start earlier @ 12:40 PM instead of lecture;
indoor labs in 3-44)

The prerequisite for this course is 38:170 or 38:192 or 15/31/38:273 or permission of the instructor. It is your responsibility to make sure you possess this prerequisite.

Introduction

This is an introductory course that will develop your understanding of the principles of biogeography. Biogeography is the study of the distribution of living organisms on both spatial and temporal scales. Understanding the distributions of plants and animals is important in order to manage human activities so as to maintain natural levels of biodiversity. As such, biogeography is an applied science; it uses principles founded in ecology, botany, physiology, behavioural science, climatology, soil science, and hydrology.

Text

The class text is *Song of the Dodo*, by David Quammen. This is a fantastic introduction to biogeography – fun to read and very un-textbookish. We may discuss passages from the book at various times during the term as they relate or add to lectures.

You are required to submit answers to questions pertaining to the text that will be handed out on the first day of class (see Assignment #2, below).

Lectures

It is important for you to attend class. Lectures in this course are not based on the reading text.

The lectures will follow the topics list below, and we'll try to get through all of them:

1. Introduction: what, why, how?
2. Biodiversity
3. Communities and Ecosystems
4. Patterns of Distribution
5. Island Biogeography
6. Biogeography and Conservation

Assignments (35% of term mark)

There are three assignments for you to complete this term. To obtain instructions for each assignment, access the course Moodle site and click on the links in the Assignments section. There are also links to documents on scientific citation methods and how to recognize peer-reviewed literature.

1. *Regional Native Plant Collection* (10%) **Due: Monday, September 30th.**

For this assignment you will create a regional native plant collection that describes the biogeography of each plant.

2. *Song of the Dodo Assignment* (10%) **Due: Wednesday, November 9th.**

You are required to submit answers to questions pertaining to the text that cover important biogeographical concepts. You will be able to answer all the questions fully by reading the text (except for the final question which requires a bit of research).

3. *Interpreting Wildlife Habitat Use with Telemetry Tracking* (2.5% + 12.5%=15%)

Due Dates:

Project chosen: Friday, September, 16th

Proposal (five references and abstract): Monday, October 17th

Final paper: Friday, December 2nd

For this assignment you will be using current, real-time data that tracks the locations of satellite tagged wildlife. You will follow your species throughout the term and write a research paper that describes their movements and how this relates to ecological requirements and conservation.

Tests (30% of term mark)

There will be a mid-term test in class on **Monday, October 31st**. The mid-term test will cover lecture material from the first half of the term. The mid-term is worth 15%.

There will be a second test during the final exam period on **Friday, December 9th** at 2:00 PM. The second test will cover lecture material that follows the mid-term test. The second test is also worth 15%.

Labs (10 x 3.5% = 35% of term mark)

There are ten (10) labs worth 3.5% each. The first five labs are outdoor field labs and the second five are indoors. Make sure you bring your field notebook and clothing appropriate for outdoor field-work (sturdy footwear, rain gear, hat, water, etc.). Remember, it is autumn and weather can change quickly. We go rain or shine (within reason).

Lab	Lab Date	Lab Name	Location	Lab Due
1	September 14 th	Spirit Sands Biogeography	Spruce Woods Provincial Park ¹	September 21 st
2	September 21 st	Native Grasses	Riverbank Discovery Centre	September 28 th
3	September 28 th	Vegetation Transects	Brandon Hills ²	October 12 th
4	October 12 th	Small-bodied Fish	Little Saskatchewan River ³	October 19 th
5	October 19 th	Water Birds & Habitat	Whitewater Lake ⁴	October 26 th
6	October 26 th	Succession	3-44	November 2 nd
7	November 2 nd	Metapopulation Dynamics	3-44	November 9 th
8	November 9 th	Rescuing the Spotted Owl: Conserving Species in Multiple Populations	3-44	November 16 th
9	November 16 th	Island Biogeography	3-44	November 23 rd
10	November 23 rd	Park Size & Species Diversity: Lessons from Islands	3-44	November 30 th
	November 30 th	Available if needed (e.g. if one of Labs 1-5 needs to be postponed or revisited due to weather each successive lab will be delayed one week). Otherwise term project work period.		

¹ We will leave @ 12:40 PM for this field lab. Come prepared for a hike, with appropriate footwear. Bring water and sunscreen if it is sunny and hot.

² We will leave @ 12:40 PM for this field lab. Come prepared for a 25 minute, easy hike into the site (sturdy footwear, rain gear, water, etc.). You must wear long pants and bring a long-sleeved shirt as we will be doing some bushwhacking.

³ We will leave @ 12:40 PM for this field lab. Come prepared for cool weather and dampness. I will provide waders, but rubber boots would also be helpful along the riverbank.

⁴ We will leave @ 12:40 PM both weeks for this field lab. Come prepared for some walking. It is often windy and cold at this site – bring a jacket, gloves, hat.

Grading and Date Summary

Term Project Chosen	0%	Sept. 16 th
Native Plant Assignment	10%	Sept. 30 th
Term Project Proposal	2.5%	Oct. 17 th
Test #1	15%	Oct. 31 st
Song of the Dodo Assignment	10%	Nov. 9 th
Telemetry Assignment	12.5%	Dec. 2 nd
Test #2	15%	Dec. 9 th
Labs	<u>35%</u>	Refer to Lab Table
	100%	

Academic Conduct

Academic dishonesty is unacceptable in this course and at Brandon University in general. Students caught cheating will be met with disciplinary action. Please refer to Section 3.13 (p.24) in the 2016-17 Brandon University Calendar for more information.

Grade Allocation

The following grade allocation is used at Brandon University. Please refer to Section 3.11.2 (p.22) in the 2016-17 Brandon University Calendar for more information.

Final Mark (%)	Grade	Grade Points	Final Mark (%)	Grade	Grade Points
90 – 100	A+	4.3	67 - 69	C+	2.3
85 - 89	A	4.0	63 - 66	C	2.0
80 - 84	A-	3.7	60 - 62	C-	1.7
77 - 79	B+	3.3	50 - 59	D	1.0
73 - 76	B	3.0	0 - 49	F	0
70 - 72	B-	2.7			