

BIOL 3151: Biogeography
Course Syllabus – Fall 2010**1 CONTACT INFORMATION**

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Office Hours: By appointment
The supplementary course website is available on Desire2Learn (D2L).

2 DELIVERY MODE/LOCATION

Virtually vis Zoom, Tuesday and Thursday, 4:00 pm to 5:30 pm

3 COURSE DESCRIPTION

A study of the distribution and dispersal of organisms. An examination of how biotic and abiotic factors interact, and species distributions respond to dynamic environmental processes such as climate and glaciation. Topics covered include history of biogeography, distribution of species, communities, and biomes, speciation and extinction, endemism, dispersal, history of lineages and biotas, patterns of continental and oceanic diversity, island biogeography, and human impacts on species distribution.

<http://navigator.lakeheadu.ca/Catalog/ViewCatalog.aspx?pageid=viewcatalog&topicgroupid=8591&entitytype=CID&entitycode=Biology+3151>

3.1 COURSE OBJECTIVES & OUTCOMES

- Explaining patterns of species distributions in terms of physical, ecological, and historical controls
- Understanding the role of processes that operate at geological and evolutionary time scales (e.g., plate tectonic effects, speciation, extinction) in the above
- Regional analysis of human impacts on species and landscapes from the Pleistocene to the modern era
- Hypotheses testing of biogeographical question (e.g., testing predictions of effects of ecosystem fragmentation on species populations; testing effects of reserve size on species richness)
- Basic data manipulation, graphical representation, interpretation and analysis
- Effective scientific report writing and critical analysis of scholarly literature

Upon completion of this course, students will be able to:

- Understand and participate in discussions regarding various aspects of biogeography on a broad as well as a local scale; and
- Identify, examine, and assess the scientific literature relating to biogeography.

4 READING MATERIALS

4.1 Required Materials

1. **Textbook:** Lomolino, M.V., B.R. Riddle, and R.J. Whittaker. 2017. *Biogeography: Biological Diversity Across Space and Time*. fifth edition. Sinauer. ISBN: 978-1-60535-472-9.

Students can be directed to this link for purchasing the ebook: <https://www.vitalsource.com/en-ca/products/biogeography-mark-v-lomolino-brett-r-v9781605356662?term=lomolino>

2. **Supporting materials:** Power point presentations Lecture outline will be posted ahead, however, lectures' presentation will be posted by the end of each lecture.

4.2 Additional Recourses:

1. Expand Your Knowledge Sheet (EYKS) is an additional material include outsource resources and questions for you to investigate on your own. [Find it on D2L in the Course Content Section in the Additional Resources folder](#)
2. Journals:
 1. *Journal of Biogeography* - the primary journal of the discipline. QH 84 J86.
 2. *Biodiversity and Conservation* - basic and applied issues in biogeography.
 3. *Check List* - an online journal of data on biodiversity featuring species lists and notes on distribution (<http://www.biotaxa.org/cl/index>)
 4. *Diversity and Distributions* - applied biogeography with a conservation focus.
 5. *Ecography* - a journal publishing many papers in biogeography. QH 540 H64.
 6. Other ecological journals such as *Ecology*, *Ecology Letters*, *Oecologia*, *Journal of Animal Ecology*, and taxon specific journals such as *Journal of Mammalogy*, *Journal of Herpetology* also publish papers on biogeographical topics. Occasionally, papers on biogeography are also published scientific news journals such *Science* and *Nature*.

5 TENTATIVE COURSE SCHEDULE

Below is the suggested timeline for the course material covered during this course. Please refer to this section for lecture preparation and due dates. Please note that due dates are firm and not negotiable. Students will be notified ahead if any minor changes might occur to this schedule. Notification will be posted in the announcement section on the course link; and it is the students' responsibility to check the announcement section regularly.

Class	Topic	Reading	Evaluation
Week 1	Course Strategy and Introduction	Course Syllabus	
	Introduction to Biogeography	Chap. 1 & 2	
	Historical Development		
Week 2	Physical Setting	Chap. 3	
Week 3	Distributions of Species	Chap. 4 & 5	Quiz 1 (Chap. 1, 2, & 3)
	Distributions of Communities and Biomes		
Week 4	Dispersal	Chap. 6 & 7	
	Speciation & Extinction Part 1		
Week 5	Speciation & Extinction Part 2	Chap. 7	Quiz 2 (Chap. 4, 5, & 6)
	Dynamic Earth	Chap. 8	Assignment 1 is due on Oct. 16 th
Week 6	Fall Break		
Week 7	Midterm Review (Chap. 1 to 8)		
	Midterm Exam on Oct. 20th		
Week 8	Island biogeography	Chap. 13 & 14	Case study reference submission is due on Nov. 3 rd
	Areography, Eco-geography & Macroecology of Continents & Oceans		
Week 9	Human biogeography & Biodiversity	Chap. 15	Quiz 3 (Chap. 7, 13, & 14)
	Habitat Loss and Fragmentation & Climate change		
Week 10	Species invasions	Chap. 16	
	The future of biogeography		
Week 11	Student Presentation		Assignment 2 is due on Dec. 2 nd
	Student Presentation		
Week 12	Student Presentation		
	Review for the Final Exam		

6 TENTATIVE EVALUATION SCHEME:

A grade for this course will be assigned based on the completion of quizzes, assignments, a midterm exam, a final exam, and a case study presentation. Some self-assessment of questions posed in class will occur throughout the semester, but these will be handed in for bonus marks.

General Knowledge <ul style="list-style-type: none"> • Quizzes (15%) • Homework (10%) 	25%
Assignments	20%
Tests <ul style="list-style-type: none"> • Midterm Exam (20%) • Final Exam (20%) 	40%
Case Study <ul style="list-style-type: none"> • Case-study Presentation (15%) • Class Discussion (5%) 	15%
Total	100%

6.1 Quizzes & Homework

Quizzes are designed to test the general knowledge of the student. Quizzes are consisting of scientific terms definitions, short answers, and environmental scenarios interpolation. Some quizzes will require specific calculations. **Quizzes will be posted on D2L under the Quiz section. Quizzes will be opened at the bagging of the lecture on the quiz's scheduled dates; and students will have 10 minutes to complete and submit them.** For quizzes dates and material please check the Tentative Course Schedule.

Self-assessment homework will be posted on D2L under the Assignment section. **Students will be notified through announcements whenever material or homework will be posted.** Its the student's responsibility to check the announcement section on D2L on regular bases.

6.2 Zoom Discussion:

Zoom discussion will be based on the reading material listed in the Tentative Course Schedule, additional material suggested for the discussion will be posted on the course website. Students are encouraged to read the required materials and be fully prepared to answer questions during the lecture.

Please pay attention to instructions. Students are fully responsible for any verbal instruction or information that will be given throughout the course. Students are welcome to share their points of view, opinions, or debates equality and with respect regarding a specific or a general concept of the discussion. **Bonus marks will be assigned based on the student preparation and discussion effort.**

6.3 Thinking Sheets (not applicable for virtual delivery)

During lectures, students will be expected to answer several questions or share their own opinion as part of a group discussion. Students will be asked to take specific notes to be submitted as what is known as a thinking sheet for bonus marks. The Thinking sheets should be posted immediately after the end of each class in the designated drop box in the assignment section on D2L. Only students who submit their sheets on time will be considered for bonus marks. Students can gain up to 10% bonus marks.

6.4 Assignment:

The instruction for the assignment including the reporting structure and rubric will be posted on D2L. Please follow the report formatting and outlines. **Refer to the class schedule for due dates.**

6.5 Exams

The midterm and final exams will be consisting of fill in the blank, scientific definitions, and short answer questions that might include diagrams and mathematical calculations. **Pre-exam Review will be provided to address students' queries and material clarification.** Midterm exam date is scheduled during the lecture time, while, final exam date and time will be scheduled during the Final Exam period by the department at a later notice. **Please pay attention to exam description for exam duration and requirements.**

6.1 Case-study Presentation and Discussion:

In the first lecture and based on class size, students will be devised into groups. **Each group is required to submit 2 case studies for the instructor to choose from to be presented and discussed during the presentation period.** The instructor then will post the final list of groups and their presentation subject as well as the Presentation instruction and Rubric on D2L. Refer to the Tentative Course Schedule for the due date.

Each group will be evaluated based on the group's comprehensive knowledge, how informative their case introduction and conclusion, individual presentation skills, slide formation, ... etc. **Audience students are expected to go through the case study materials and prepare 3 questions for each presentation to be ask during the presentation discussion period.**

6.2 Presentation's Evaluation Form (**not applicable for virtual delivery**)

Audience students were required to fill the presentation evaluation sheet for each presenting group and handed in by the end of the class. Evaluation sheets for each presentation should be submitted immediately after the end of the lecture in the Students Evaluation folder in the Assignment section in D2L.

7 IMPORTANT DATES:

Please check the following link:

<http://csdc.lakeheadu.ca/~Catalog/ViewCatalog.aspx?pageid=viewcatalog&catalogid=26&topicgroupid=23469>

NOTE: Any important announcements, including changes in due dates, will be announced in class and posted on Desire2Learn.

8 COURSE POLICIES

8.1 Missed Test Policy:

Students are encouraged to do their exams on the date and time posted. Changing exam date and time is not negotiable under any circumstances unless the student(s) are admitting to a hospital for emergency care and provides supporting documentation. Make-up examinations will only be given with written documentation from a healthcare practitioner using the official Student Health Certificate, available at <https://www.lakeheadu.ca/current-students/student-health-and-wellness/documentation>

Final examinations begin Dec 8th. There will be no rescheduling of examinations to accommodate holiday travel or extracurricular activities. No one will be allowed to write examinations prior to the scheduled date.

8.2 Assignment Deadline Policy

Students are encouraged to submit their assignments on time and avoided last minute submission. Late assignments carry a 25% reduction in value per day unless its specifically mentioned in the assignment instruction, no exceptions.

8.3 Attendance

Students are encouraged to attend classes. Absence will make them loos their mark for the assigned quiz or the assignment in that day.

8.4 Behaviour, Non-academic Misconduct

Lakehead University's policy regarding disruptive behavior is outlined in the course calendar. Briefly, interference, obstruction or disruption of teaching, disruptive behavior including refusal to cooperate with any University staff member performing his or her duties constitutes non-academic misconduct, violates University standards and is subject to disciplinary procedures.

8.5 Handheld Devices, Food

Handheld devices such as cell phones, MP3 players, etc. may not be used during a quiz or an exam. Disruptive use of such devices during lecture and labs constitutes non-academic misconduct and will be treated as such. Food is not permitted in lectures.

8.6 General Regulations

Student Accessibility Services (SAS) (Thunder Bay) and Student Affairs (Orillia) coordinate services and facilitates reasonable academic accommodations for students with disabilities. Academic accommodations are provided based on documentation of a disability. Additional information is available at the following Orillia campus websites: <https://www.lakeheadu.ca/faculty-and-staff/departments/services/sa-orillia>

8.7 Academic Dishonesty:

The University takes a most serious view of offenses against academic honesty such as plagiarism, cheating, and impersonation. Penalties for dealing with such offenses will be strictly enforced. A copy of the "Code of Student Behaviour and Disciplinary Procedures" including sections on plagiarism and other forms of misconduct may be obtained from the Office of the Registrar.

The following rules shall govern the treatment of candidates who have been found guilty of attempting to obtain academic credit dishonestly. (a) The minimum penalty for a candidate found guilty of plagiarism, or of cheating on any part of a course will be a zero for the work concerned. (b) A candidate found guilty of cheating on a formal examination or a test, or of serious or repeated plagiarism, or of unofficially obtaining a copy of an examination paper before the examination is scheduled to be written, will receive zero for the course and may be expelled from the University. Students disciplined under the Code of Student Behaviour and Disciplinary Procedures may appeal their case through the Judicial Panel.

Note: "Plagiarism" shall be deemed to include:

1. Plagiarism of ideas as of where an idea of an author or speaker is incorporated into the body of an assignment as though it were the writer's idea, i.e. no credit is given the person through referencing or footnoting or end-noting.

2. Plagiarism of words occurs when phrases, sentences, tables or illustrations of an author or speaker are incorporated into the body of a writer's own, i.e. no quotations or indentations (depending on the format followed) are present but referencing or footnoting or end noting is given.
3. Plagiarism of ideas and words as where words and an idea(s) of an author or speaker are incorporated into the body of a written assignment as though they were the writer's own words and ideas, i.e. no quotations or indentations (depending on format followed) are present and no referencing or footnoting or end-noting is given.

A listing of University Regulations can be found at: <http://csdc.lakeheadu.ca/Catalog/ViewCatalog.aspx?pageid=viewcatalog&catalogid=26&chapterid=7661&loaduserredits=False>. The code of student behavior and disciplinary procedures can be found at: <https://www.lakeheadu.ca/about/policies-procedures>