



COURSE OUTLINE: FALL 2021

COURSE TITLE:	ECOLOGY OF DISTURBED HABITATS
COURSE CODE:	BIOL 4115 (FAO)
CREDITS:	0.5
WEEKLY HOURS:	3.0 (2 lectures per week: tues & thurs 16h00 to 17h30)
LAB:	3.0 (mon 14h30 to 17h30)
ROOM:	N/A – course delivered via Zoom
REQUIRED TEXT:	Walker, L. R. (2012). <i>The Biology of Disturbed Habitats</i> . Oxford University Press; additional readings & other course materials will be available via <i>desire2learn</i> https://www.vitalsource.com/en-ca/products/the-biology-of-disturbed-habitats-lawrence-r-walker-v9780191625329?duration=180&gclid=EAIaIQobChMItL3Qr8bZ6wIVlueGCh3FYQ_PEAkYASABEgLk_PD_BwE
PROFESSOR:	DR. GERARDO REYES
OFFICE:	OR 1035 (Residence Building 1 st floor)
TELEPHONE:	(705) 330-4008 x2698
E-MAIL:	greyes@lakeheadu.ca
OFFICE HOURS:	by appointment (set up via e-mail)



1. COURSE DESCRIPTION

Habitat and plant community response to natural and human induced ecosystem disturbances will be discussed with special reference to type, intensity and frequency of disturbance. Particular attention will be focused on regeneration strategies of dominant plants, species diversity and composition, near-ground microclimate, and changes in soil physical and chemical properties. Vulnerability and resilience of ecosystem integrity will be explained on the basis of biotic and abiotic factors with special reference to boreal forests. Remediation of adverse ecological impacts resulting from human induced disturbances will be discussed. Technical writing based on field and laboratory studies, term papers, and seminar presentations are required components of the course.

2. COURSE GOALS

You will be introduced to key theoretical and conceptual foundations associated with disturbance ecology. Particular attention will be given to the following:

- (a) gaining an advanced understanding of the various types of disturbances and the key processes involved in initiating & propagating them;
- (b) gain knowledge of potential disturbance planning and management options;
- (c) to assess the strengths and limitations of environmental models that characterize the nature and consequences of natural and anthropogenic disturbances; and
- (d) to gain appreciation for the complexities of studying & responding to historical & novel disturbance events.

Analytical, technical, and applied skills

You will:

- (a) develop a practical understanding of the challenges involved in managing of real-world cases & issues;
- (b) improve critical reading skills through evaluation and review of assigned materials;
- (c) improve written communication skills by writing short-answer responses to questions related to assigned course readings;
- (d) improve oral communication skills through in-class discussion; and
- (e) improve group environment and project management skills.



3. MODES OF INSTRUCTION

Assigned readings, lectures, a module, and group discussions are employed. Students are expected to be prepared in advance prior to each lecture by completing assigned readings accessible on D2L. Class time will build upon this base, focusing on important and/or more difficult concepts through *lecture and discussion*. During the first few weeks, lectures will generally start with an introduction to the material by me, followed by a discussion and/or question period. By week four, student groups will lead &/or assist in presenting the core concepts and ideas related to the topics covered in the assigned readings followed by structured as well as open discussion on the readings and their implications. Occasional guest speakers (two so far) will provide authoritative insight while video clips will be used regularly.

Notice for Recording Lectures & Class Activities

In BIOL 4115, in the context of remote instruction and participation, video and audio recordings of class activities will be made to ensure students' and instructors' easy and comprehensive access to those activities. The recordings are confidential and are intended only for the use of the course students and instructors. They may otherwise not be used or disclosed. During recording, to protect others' privacy, each student should ensure that no one else is present in the location where they are being recorded without that non-student's consent. The recordings are made under the authority of sections 3 and 14 of The Lakehead University Act, 1965. Questions about the collection of the images and sounds in the recordings may be directed to Dr Azim Mallik, Chair of Biology, 955 Oliver Road, Thunder Bay, ON, Canada, P7B 5E1, (807) 343-8927.

https://www.lakeheadu.ca/sites/default/files/policies_procedures/Student%20Code%20of%20Conduct%20-%20Academic%20Integrity.pdf



4. COURSE OUTLINE

Again, all lectures will be interactive (lecture, discussion, question & answer, other in-class activities), thus requiring everyone to read the assigned material prior to class. The course is designed to encourage active participation; thus, its success (& fun!) will depend on coming to class prepared and engaging one another in friendly discussion & debate; i.e., group discussion periods** will provide you an opportunity to apply knowledge gained through previous lectures and reading materials.

**topics to be addressed during discussion periods could include: disturbance & disease epidemics/pandemics, unexpected impacts of extreme disturbance events, warfare, climate change, social impacts of disasters, risks & impacts on the poor, etc.

The tentative schedule is as follows:

Week 1	Sep 7	Welcome back! Introduction to disturbance ecology (Chap 1)
	9	Terrestrial Habitats (Chap 2, 9)
Week 2	Sep 14	Terrestrial Habitats II
	16	Disturbance regimes (A1)
Week 3	Sep 21	Aquatic Habitats (Chap 3) - <i>assign dates for discussion periods</i>
	23	Discussion period I
Week 4	Sep 28	Introduction to Ordination
	30	Discussion period II###
	Oct 3	A1 – part A report due midnight
Week 5	Oct 5	Anthropogenic Habitats (Chap 4)
		Impacts of disturbance on ecosystem processes (Chap 5)
	7	Guest lecturer (Chris Jones OMECP)
		Discussion period III###
	Oct 10	A1 – part B report due midnight
Week 6	Oct 12	READING WEEK
	14	READING WEEK



Week 7	Oct 19 21	MIDTERM Module (Chap 5)
Week 8	Oct 26 28	Discussion period IV### Guest Lecturer: Dr Taylor Scarr Module continued
Week 9	Nov 2 4	Discussion period V### Module continued
Week 10	Nov 9 11	Spatio-temporal dynamics (Chap 7, 8) Managing natural disturbances – towards a safer environment (Chap 9)
Week 11	Nov 16 18	Seminars Seminars
Week 12	Nov 23 25	Seminars Seminars
Week 13	Nov 30 Dec 2	tba tba

Exam period

= student-led discussion

5. EVALUATION OF ACHIEVEMENT

MIDTERM: 15 %

DISCUSSION/SEMINARS:

- WHEN LEADING DISCUSSION: 10 %
- WHEN ACTIVELY PARTICIPATING: 5 %

Leading discussion: after selecting a group to be a part of (1-8), your group will be responsible for leading the discussion in one of weeks 4 to 9; for the remaining other weeks, you need to prepare for and actively participate in the discussion. **Leading discussion involves:** reading an assigned article, create a .ppt presentation that provides a short summary of the article for the class, & stimulate discussion & dialogue by asking questions & offering insight & opinions on the subject matter.

Participation: you will need to (a) read & prepare notes on the assigned article(s), (b) arrive to class with **one (or more) questions (with answers) or critical comments** related to the article (nb., one Q&A is required for each article scheduled for the day) – this should be printed or written out so that you have a copy ready to share with the class. Additionally, one copy with your name & student ID# should be submitted via dropbox prior to the start of discussion, and (c) actively participate.

ASSIGNMENTS/MODULE: 20 %

LAB REPORTS: 35 %

SEMINAR: 15 %

Late submissions of assignments, tests, &/or exams will be subjected to a 25 % reduction to your grade per day



For your reference:

Table 1. Due dates for all graded components of our course

	Assignment	Due date	Proportion of grade
1	Discussion I (Q&A)	Sep 23 (before class)	1
2	Discussion II (Q&A)	Sep 30 (before class)	1
3	Landscape disturbance (A1 - part A)	Sun Oct 3	5
4	Landscape disturbance (A1 - part B)	Sun Oct 10	5
5	Discussion III (Q&A)	Oct 7 (before class)	1
6	Midterm	Oct 19	15
7	Discussion IV (Q&A)	Oct 26 (before class)	1
8	Discussion V (Q&A)	Nov 2 (before class)	1
9	Module	Sun Nov 7	10
10	Discussion (leading discussion)	tbd	10
11	Seminar	tbd	15
	LABS	tbd	35
	TOTAL		100

GRADING SCHEME:

A+	90 to 100%	Outstanding understanding of the course concepts including integration of materials and ideas, ability to apply knowledge to situations
A	80 to 89%	
B	70 to 79%	Above average to excellent knowledge, ability to apply knowledge to situations
C	60 to 69%	Satisfactory knowledge including ability to recognise and apply major course concepts, and to progress to next level of course
D	50 to 59%	Some grasp of course concepts; will likely encounter difficulty with higher levels
E	40 to 49%	Failed to meet minimum requirements of the course
F	1 to 39%	Failure
F	0	Failure resulting from academic dishonesty



6. NETIQUETTE

Much like in a regular classroom, it is important that a positive, safe, dynamic, and constructive online learning environment is maintained. Thus, a set of guidelines for maintaining Netiquette are listed below. While you may not always agree with your instructor's or one of your peer's posts on the discussion board, please remember that everyone's opinions, thoughts, and responses must be respected. So while you are strongly encouraged to comment, question, or critique a post, personal attacks on an individual are not permitted. Essentially, we wish to build and maintain an engaging and respectful online learning environment.

Our online classroom Netiquette guidelines are as follows:

- Do not dominate any discussion. Give other students the opportunity to join in the discussion.
- Do not use offensive language. Present ideas appropriately.
- Be cautious in using Internet language. For example, do not capitalize all letters since this suggests shouting.
- Popular emoticons such as 😊 or 😞 can be helpful to convey your tone but do not overdo or overuse them.
- Avoid using vernacular and/or slang language. This could possibly lead to misinterpretation. Essentially, take some time to formulate your ideas. Be clear, concise, and complete.
- Never make fun of someone's ability to read or write.
- Share tips with other students.
- Keep an open-mind and be willing to express even your minority opinion. Minority opinions must be respected.
- Think and edit before you push the *send* button.
- Do not hesitate to ask for feedback.
- Using humor is acceptable but be careful that it is not misinterpreted. For example, are you being humorous or sarcastic?

Guidelines adapted from:

Mintu-Wimsatt, A., Kernek, C., & Lozada, H. R. (2010). Netiquette: Make it part of your syllabus.

Journal of Online Learning and Teaching 6(1). Retrieved from http://jolt.merlot.org/vol6no1/mintu-wimsatt_0310.htm

7. STUDENT RESPONSIBILITIES

Students are expected to participate in all course activities and complete all assignments on time. Late assignments carry a 25% reduction in value per day, no exceptions. This may seem rather severe, but it's just not fair to those who hand assignments in on time.

General regulations

It is the responsibility of each student registered at Lakehead University to be familiar with, and comply with all the terms, requirements, regulations, policies and conditions in the Lakehead University [Academic Calendar](#). This includes, but is not limited to, Academic Program Requirements, Academic Schedule of Dates, University and Faculty/School Policies and Regulations and the Fees and Refund Policies and Schedules

Student Support

There are many resources available to support our students. These include but are not limited to:

- [Health and Wellness](#)
- [Student Success Centre](#)
- [Student Accessibility Centre](#)
- [Library](#)
- [Academic Support Zone](#) (Writing and Math Tutoring Centre)

Lakehead University is committed to achieving full accessibility for persons with disabilities. Part of this commitment includes arranging academic accommodations for students with disabilities and/or medical conditions to ensure they have an equitable opportunity to participate in all of their academic activities. If you are a student with a disability and think you may need accommodations, you are strongly encouraged to contact Student Accessibility Services (SAS) and register as early as possible. For more information, please contact Student Accessibility Services <http://studentaccessibility.lakeheadu.ca> (SC0003, 343-8047 or sas@lakeheadu.ca)



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 on the basis of documentation of a disability. Additional information is available at the following campus websites:

Thunder Bay: <https://www.lakeheadu.ca/students/student-life/student-services/accessibility/>

Orillia: <https://www.lakeheadu.ca/students/student-life/student-services/or>

Academic dishonesty (plagiarism):

The most common offense under the [Academic Code of Conduct](#) is plagiarism.

This could be material copied word for word from books, journals, internet sites, professor's course notes, etc. It could be material that is paraphrased but closely resembles the original source. It could be the work of a fellow student, for example, an answer on a quiz, data for a lab report, a paper or assignment completed by another student. It might be a paper purchased through one of the many available sources. Plagiarism does not refer to words alone - it can also refer to copying images, graphs, tables, and ideas. "Presentation" is not limited to written work. It also includes oral presentations, computer assignments and artistic works. Finally, if you translate the work of another person into French or English and do not cite the source, this is also plagiarism.

I.E., DO NOT COPY, PARAPHRASE OR TRANSLATE ANYTHING FROM ANYWHERE WITHOUT CITING WHERE YOU OBTAINED IT!

[University guidelines on the matter:](#)

The University takes a most serious view of offences against academic honesty such as plagiarism, cheating and impersonation. Penalties for dealing with such offences 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 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 endnoting.
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 endnoting 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 endnoting is given.

A listing of University Regulations can be found at:

<http://csdc.lakeheadu.ca/Catalog/ViewCatalog.aspx?pageid=viewcatalog&catalogid=27&chapterid=8325&loadusercredits=False>

The code of student behaviour and disciplinary procedures (effective May 1, 2019) can be found at:

https://www.lakeheadu.ca/sites/default/files/policies_procedures/Student%20Code%20of%20Conduct%20-%20Academic%20Integrity.pdf