Biology 4410F: Restoration Ecology 2018

“Here is the means to end the great extinction spasm. The next century will, I believe, be the era of restoration in ecology.”

E. O. Wilson, Biodiversity, 1988

Instructor: Dr. Daria Koscinski, Department of Biology, email: Daria.Koscinski@uwo.ca, Office: Collip 105. Office hours by email appointment.

Teaching Assistant: Curtis Lubbe, email: flubbe@uwo.ca

Students must use their Western (@uwo.ca) email addresses when contacting the instructor and TA.

Prerequisites: Biology 3442F/G and 3445F (may be waived by special permission from instructor)

Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may 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.

Outline and topics covered

The course will look at restoration ecology in theory and in practice. Topics covered include ecosystem functioning, ecological relationships at various spatial scales as they apply to restoration, invasive species management, restoration of various types of ecosystems (e.g. forest, tallgrass prairie, wetland), value of ecosystem services, financial and practical considerations in ecological restoration projects. We will use case studies as examples, with a focus on local restoration projects. Local experts will be featured as guest lecturers. The main evaluations will be based on a group project.

Format

This course is a Community Engaged Learning (CEL) Course. Students will be working on group projects in partnership with Thames Talbot Land Trust (TTLT). The partner provides students with an opportunity to see restoration ecology in practice. In return students will be researching and writing reports on various topics to assist in restoration efforts at TTLT’s Joany’s Woods property. There will be two mandatory weekend field days at the site on September 29th and October 27th (9:30am-4pm). In addition, students will participate in invasive species removal at UWO in partnership with Landscape Services to assist in campus restoration projects. Group work and interaction with stakeholders are major parts of real world ecological restoration projects and the course is structured to include extensive group work.

Learning Outcomes

Upon completion of the course students will be able to:

1. Recognize local ecosystems and identify at least 10 species of plants by conducting field work and producing a plant collection assignment.
2. Describe the theoretical aspects of restoring different types of ecosystems by discussing and presenting case studies.
3. Apply content knowledge of restoring different types of ecosystems to real-world settings and contexts by creating a restoration plan for a local site.
4. Recognize current issues in restoration ecology, synthesize research and integrate information by creating a sound restoration plan.
5. Demonstrate understanding of the practical aspects of restoring ecosystems, working with communities and producing sound restoration plans through engagement with the community partner.
6. Apply planning, delegation, prioritizing, time-management, and organizational strategies by collaborating on a term-long group project.
7. Practice reflective thinking to connect CEL experience with course content and personal values.
8. Recognize and develop own sense of and commitment to civic engagement and social responsibility.

Classes and tutorials
Lectures and tutorials are Thursdays 2:30-5:30 in UC 1110. Although the lectures (2 hours) and tutorials (1 hour) are officially split, the actual time spent on lecture and tutorial will vary each week. You are expected to attend the full 3 hour session each week. Attendance will be recorded each week.

Course website
Course materials will be available through OWL. Students are responsible for checking OWL (http://owl.uwo.ca) on a regular basis for news and updates. This is the primary method by which information will be disseminated to all students in the class.

Readings
Readings are assigned in the Course Schedule. The required text for the course is “Introduction to Restoration Ecology” by E.A. Howell, J.A. Harrington, S.B. Glass. The text is on reserve at Taylor library (1 day loan). Additional readings will be posted on OWL and indicated on the Course Schedule.

Evaluation
In this community engaged learning course there will be a number of opportunities for evaluation of your learning, engagement in your teams and quality of contribution to the projects. Fifty-three percent (53%) of the grade is based on individual performance and 47% on team performance.

Learning is a shared responsibility of students and faculty. Students are expected to complete all readings BEFORE lectures on the dates of the assigned readings. Every attempt will be made to make lectures interesting, engaging and thought-provoking using active learning and learner–centered strategies. Some material covered during lectures might not be in readings. Note-taking is the responsibility of the student.

Active student involvement is essential. You are expected to attend all classes and field trips; come to class on time; be prepared and ready to participate in discussion; contribute original ideas; listen attentively; debate respectfully and persuasively; suggest strategies and act on strategies to work through differences to complete tasks; evaluate ideas and arguments of others and integrate them into your evaluations; work collaboratively and contribute to the learning of your classmates. Disruptive behaviour, such as ringing cell phones; talking; text messaging; Facebook, Twitter, disturbing consumption of food or drink; littering; listening to music; e-mailing or using internet are not acceptable during the class.
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* All team members receive the same grade

** All assignments due to OWL at 2:30pm unless indicated otherwise.

**CEL Restoration Project (65% of final mark)**
Groups of 3-5 students will work on projects related to restoration of habitat at various sites across UWO. Each group will prepare a project outline (individually first = 3%, then as a group = 7% of final mark), presentation (15% of final mark) and a report (25% of final mark) on their project. Reports will be submitted to our partner.

All group members will evaluate each other on their contribution to the group project (10% of final mark).

**Partner Surveys (5% of final mark)**
Thames Talbot Land Trust will be creating three (3) surveys for student completion. These are tools to help the community partner assess student learning and any changes in behaviour or attitudes related to nature. The surveys are worth 5% of your final mark and are assessed simply as completed or not completed. There are no marks associated with the content of your responses.

Details about the Partner Surveys will be updated in class and posted to OWL.

**Reflections (10% of final mark)**
A component of CEL is a reflection of your experience in the program. You will be writing 3 short entries and will be evaluated on the quality of your written reflection (worth 2%, 3% and 5% of final mark, respectively). Resources will be provided to help you familiarize yourself with reflections and a practice reflection will be written in the first class. Reflection assignments will be submitted in OWL.

**Participation (10% of final mark)**
Active student involvement is essential. You are expected to attend all classes and field trips; come to class on time; be prepared and ready to participate; contribute original ideas; listen attentively; debate respectfully and persuasively; suggest strategies and act on strategies to work through differences to complete tasks; evaluate ideas and arguments of others and integrate them into your evaluations; work collaboratively and contribute to the learning of your classmates. Disruptive behaviour, such as ringing
cell phones; talking; text messaging; Facebook, Twitter, disturbing consumption of food or drink; littering; listening to music; e-mailing or using internet are not acceptable during the class.

Native Plant Collection (15% of final mark)
As part of the course you will prepare a scrapbook of native plants. The assignment will include collecting plants, pressing specimens, researching your chosen species and some creativity. Further details and opportunities for collection will be provided in class time.

Bonus Marks
Opportunities may exist to earn bonus marks through a variety of activities and/or assignments.

Strategies for Success

Come prepared
Read the required materials before class so you get the most out of lectures. Complete research and background work before you meet with your team to maximize the time you spend together. Make a plan before the field trips so you complete all the necessary work while on site. Coming prepared ensures you reinforce your learning, makes efficient use of your time, and leads to good team dynamics.

Be present
When you’re in class focus on class work. When you’re with your team focus on your project. When you’re at your field site focus on your tasks. Eliminate distractions such as videos, social media, materials from other courses, etc. so you can learn and complete your tasks during devoted time. Being present will increase your chances of being efficient and leads to good team dynamics.

Engage
There are no exams in this course. The instructor will not ask you to repeat information you learned. You will demonstrate your learning with the quality of your assignments. Engage actively with the course material, community partner and your team to maximize your learning. Ask questions in class, discuss ideas with your team, participate actively in class activities, field trips and with the community partner staff and volunteers, be proactive to solve problems or tackle difficult situations as they come up. You will learn more than content in this class, you will learn skills you can take with you to any future work you do. If you don’t know how to do something – content related or team work related – ask for help! Don’t wait until the end of the course to complain or to realize you missed a great opportunity.

Your marks in this course will reflect your commitment to the above three principles. Keep in mind that every student learns differently, find what works best for you. If you need support please speak to the instructor.

Academic Policies

The website for Registrarial Services is http://www.registrar.uwo.ca.

Absences and Illness Accommodation
Please speak to me in advance if you require extensions for assignments for medical or personal reasons if at all possible (even a short email). It is much easier to make arrangements if I know in advance that you will miss a deadline. You must provide valid medical or supporting documentation to the Academic Counselling Office of your home faculty as soon as possible. If you are a Science
student, the Academic Counselling Office of the Faculty of Science is located in NCB 280, and can be contacted at scibmsac@uwo.ca. Note that approval of accommodation for any course component worth 10% or more can only be made by the student’s Academic Counselling Unit. For course components worth less than 10% the instructor will grant accommodation. Please refer to the University’s Policy on Accommodation for Medical Illness: www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_illness.pdf

Please speak to me in advance if you require accommodation for a religious holiday. Please see the policy on Accommodation for Religious Holidays http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_religious.pdf

Unexcused late assignments will be penalized 10% per day to a maximum of 5 days. After 5 days unexcused late assignments will not be accepted and a grade of 0 awarded.

Scholastic 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

Plagiarism is the submission of the work of someone else without giving credit to the author, and presenting the work as your own. When the ideas or words of others are used, as they necessarily will be, proper citation and reference to their source must be given. Plagiarism is unacceptable and is considered a major offence by both the university and myself. There will be little, if any, sympathy for a student caught plagiarizing. If you are unsure what plagiarizing is please familiarize yourself with the University guidelines (see website above). If you are still unsure please talk to me.

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).

Communications
In accordance with policy, http://www.uwo.ca/its/identity/activatenonstudent.html, the centrally administered e-mail account provided to students will be considered the individual’s official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at his/her official university address is attended to in a timely manner.

Support Services
Please contact me if you require material in an alternative format or 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 519-661-2111 x 82147 for any questions regarding accommodations. Please refer to the University’s Policy on Accommodation for Students with Disabilities: www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_disabilities.pdf

Learning-skills counsellors at the Student Development Centre (http://www.sdc.uwo.ca) are ready to help you improve your learning skills. They offer presentations on strategies for improving time management, multiple-choice exam preparation/writing, textbook reading, and more. Individual
support is offered throughout the Fall/Winter terms in the drop-in Learning Help Centre, and year-round through individual counselling.

Students who are in emotional/mental distress should refer to Mental Health@Western http://www.uwo.ca/uwocom/mentalhealth/ for a complete list of options about how to obtain help.

Additional student-run support services are offered by the USC, http://westernusc.ca/services.