

**Forest Ecosystem Field Course Outline**  
**BIOL 4451**  
**Section 2: August 24-31, 2018**

**Instructor: Dr. Alana Westwood** (Science & Policy Analyst, Yellowstone to Yukon Conservation Initiative and Contributing Scientist, Boreal Avian Modelling Project)

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**Classroom:** 4CM42

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**Overview**

The goal of the course is to provide you with the knowledge and skills that you need to be able to measure the physical structure of the forest, estimate biological diversity of forest plots, and quantify ecological features such as light, wildlife presence, and forest gap dynamics. You will also learn expected skills for working in the forest industry such as stocking and free-to-grow surveys, as well as visit and learn about working forests. Manitoba is an ecologically diverse province, and you will learn how to quantify this diversity by measuring forests of various types and ages, and comparing and contrasting these forests across successional stages and ecological communities.

**Overview of Course Activities**

The content of the course consists of seven field exercises. Transportation to access the field sites will be provided, and drivers assigned during course section 1. All of the field trips are day trips, and students are responsible for their own food and lodging (in Winnipeg) for the duration. Of the field exercises, six of will be reported on (in a group report submitted to the instructor after the completion of the field components), and all seven count towards participation marks. Not all students will receive the same mark for the same group report: individual marks will be modified according to participation and effort. Instructions, datasheets, and specific reporting requirements for each exercise will be provided as part of the course booklet and reviewed on the first day of section 2 (Friday, Aug 24).

Note that Exercises 1-5 were covered in course section 1, and are evaluated in a separate report provided to Dr. Tardif. In course section , the exercises we will complete include:

**Exercise 6:** Forest succession comparison using plant diversity and physical factors (6 forest plots)

**Exercise 7:** Regeneration/stocking survey (1 forest plot)

**Exercise 8:** Free to grow assessment (1 forest plot)

**Exercise 9:** Gap assessment (3 forest plots)

**Exercise 10:** Wildlife sign survey (3 forest plots)

**Exercise 11:** Light measurement (3 forest plots)

**Exercise 12:** Woodlot field tour (not part of report, but counts towards participation)

## Course Schedule

Course Day	Date	Morning	Afternoon
1-4	Mon, Aug 20 to Thur, Aug 23	Course section 1, Dr. Jacques Tardif, Sandilands field station. Completion of exercises 1-5.	
5	Fri, Aug 24	10am-1pm –UW Room 4CM42 for orientation and overview of remainder of course	Recuperate and prepare for a busy week!
6	Sat, Aug 25	8am Deacon’s Corner, drive to Sandilands Exercise 6: Successional diversity comparison, sites 1&2 12 pm – lunch in forest	1pm - Exercise 6 cont’d: Sites 3&4 6pm – Debrief and depart
7	Sun, Aug 26	8am Deacon’s Corner, drive to Sandilands Exercise 6 cont’d: Sites 5&6 12 pm – lunch in forest	1pm - Exercise 7: Stocking survey, site 7 6pm – Debrief and depart
8	Mon, Aug 27	8am Deacon’s Corner, drive to Sandilands Exercise 8: Free to grow survey, site 8 12 pm – lunch in forest	1 pm – Exercises 9, 10, & 11: Gap dynamics, wildlife sign, light measurement, forest type 1 6pm – Debrief and depart
9	Tues, Aug 28	Meet 8am at Bois-des-Esprits meeting point Exercises 9, 10, & 11: Forest type 2 12 pm – lunch in the forest	1 pm – Exercises 9, 10, & 11 cont’d 3 pm – Debrief and depart
10	Wed, Aug 29	8 am – Meet at Deacon’s corner 8 am – 4 pm – Exercise 12: Manitoba Forestry Association (MFA) guided woodlot tour**	
11	Thurs, Aug 30	Meet 9am at Living Prairie Museum Exercises 9, 10, & 11: Forest type 3 12 pm – lunch in the forest	1 pm – Exercises 9, 10, and 11 cont’d 3pm – Return vehicles
12	Fri, Aug 31	Make up day in event of adverse weather	

\*Depending on the amount of time taken to complete exercises, completion time in the afternoon may vary. Irrespective of when the exercises are finished, no member is to leave without permission from the instructor.

\*\*If adverse weather causes the cancellation of the MFA tour, it will take place on Thurs, Aug 30, and subsequent field day will be pushed accordingly

### *What to bring on field trips*

- Sunglasses
- Compass – with clear plastic base, declination adjustment, and sighting mirror
- Lighter or waterproof strike anywhere matches in waterproof case
- Personal first aid kit (ensure you have all necessary allergy medications)
- Flashlight
- Knife (belt or pocket) or multi-tool
- Minimum of 1 L of water
- Rain gear
- Insect repellent and/or bug hat
- Day pack for carrying gear in field (approximately 35L size)
- Water-resistant notebook
- Pens/pencils
- Calculator
- Plant Identification guide - Plants of the Western Boreal Forest (see below)
- Forest Measurement book - Forest Mensuration (see below)
- Lunch/dinner/snacks/water (enough to last a 7-10 hour day in the field, potentially under hot sun)
- Plastic bags for sampling plants for later ID

### *Recommended items but not mandatory:*

- Safety boots – steel toe – CSA approved
- Orange safety vest, orange overalls or orange jacket
- Whistle – pealess (fox 40)
- Sunscreen
- Long pants, long-sleeved shirt
- Hat
- A clipboard or fold-flat binder
- Plant collecting equipment including bags for collecting plants, trowel, and pruner
- Cell phone
- Camera
- Binoculars
- Waterproof pack cover
- Large plastic or ziplock bags for your course booklet or textbooks in the event of heavy rain
- Any other equipment you deem necessary for a day in the field

### **General reporting requirements**

The results of exercises 6-11 will be reported in a group report. Specific instructions for each exercise are given in the relevant exercise sheets, which will be provided as part of the course booklet. A marking scheme for the report will also be provided in the course booklet. Specific instructions for report formatting, length, and presentation, will also be provided in the course booklet.

Data collection, required computations, and development and presentation of final report should be performed on a team basis. Although teams are free to allocate work among team members in the most

efficient way possible, it is mandatory for team members to contribute equally to the preparation and compilation of reports. Furthermore, each member of the team should be familiar with all phases of the work.

Team members that do not participate fully, thereby placing the burden of extra work on others risk having their names omitted from the final report, and thereby gaining a mark of zero. To gauge participation, each team member will provide a brief peer-evaluation of his or her teammates' participation that will be emailed to the instructor. A template for the peer-evaluation is given as part of the course booklet. In the workplace, one must continually demonstrate initiative and teamwork: 'coasting' will result in the loss of a job! Do not underestimate the consequences of failing to participate fully and equally, both in life and for your mark in this course.

### **Report and Evaluation**

*Total Mark: 66% of your course grade, to be comprised of:*

Report on six field exercises:*	60%
Full participation in field:	6%

\*This mark will be modified for each student using the peer assessment procedure given in the course book.

Your report (text, tables, figures and appendix, in .doc or .docx format) should be uploaded to the NEXUS site by 11:59 pm on **Sunday, September 16**. Each student must also upload a peer evaluation report to the instructor, due simultaneously.

**Late reports will be highly penalized**, at a rate of 10% loss of mark per late day. Given that the reports are group projects, there will be no exceptions to this penalty. Plagiarism will not be tolerated and principles of academic integrity must be upheld for all submitted work. Letter grades for the course will be calculated based on the total mark from sections 1 and 2, in accordance with the standard scheme used by the University of Winnipeg Department of Biology.

### **Course Policies**

1. *Attendance is mandatory.* You are expected to attend all lectures, labs, and field trips. Attendance will be taken and unnecessary, unplanned absences will be considered toward your grade. If there will be a problem that prevents you from attending, notify the instructors before the absence.
2. *Preparation for field trips.* Please be fully prepared and ready for all field trips. You are responsible for your own lunches/water, appropriate clothing, and needed and required equipment as per the included lists. Transportation is provided for all field trips except Point Pleasant Park. Field trips will continue independent of weather.
3. *Safety.* You must adhere to all safety guidelines, including being bear aware and responsible driving. When out of sight of instructors, you must stay in groups of 2 or more and inform instructors of where you are going and when you will return. Alcoholic beverages and drugs are not permitted on field trips.
4. *Nexus.* Besides the course book, all course material and supplementary information will be posted on the Nexus course site. Students are responsible for reviewing this.

## ACADEMIC REGULATIONS AND POLICIES

It is your responsibility to be familiar with the information on Academic Regulations and Policies of the 2017-18 Calendar which can be found on the University's website

(<http://www.uwinnipeg.ca/academics/calendar/docs/regulationsandpolicies.pdf>). This section covers classroom regulation, grading, transcripts, challenge for credit, academic standing, student discipline (academic and non-academic misconduct), appeals including grade appeals, University Policies and Codes, graduation.

A summary of important information regarding Academic Misconduct follows:

### *Forms of Academic Misconduct:*

- **Plagiarism:** includes presenting other people's published or unpublished work in part or as a whole as your own. This includes material from lab manuals, essays, journal articles, books, etc. Plagiarism also refers to submitting the same work in more than one course without both instructors' permission and to the situation where two or more students submit identical (or nearly identical) work for evaluation when the work was to be completed individually (p 9).
- **Cheating:** includes copying another person's answer on a test, communicating with another person during a test or exam, consulting unauthorized sources (incl. written and electronic sources), obtaining a copy (all or part) of a test/exam/assignment before it is officially available, purchasing tests, essays or other assignments and submitting the work as your own (p 10).
- **Improper Academic/Research practices include:** fabricating or falsifying results, using other peoples' research findings without permission, misrepresenting research results or methods, referring to non-existent sources or investigators, contravening the University's Policy and Procedures On Research Integrity (p 10).
- **Obstructing academic activities of another person;** for example interfering with another person's access to pertinent resources or information to gain academic advantage (p 10).
- **Impersonation:** both impersonation of another individual or allowing someone to impersonate you (p 10).
- **Falsification or Modification of an Academic Record:** including tests, transcripts, letters of permission, etc. (p 10).
- **Aiding and Abetting Academic Misconduct** (p 10).

### *Procedures:*

All allegations of academic misconduct must be reported initiating a process which involves several steps. These include procedures involving the instructor of the course in which the misconduct is alleged to have occurred, the Departmental Review Committee, and the Senate Academic Misconduct Committee. See pages 110 through 16 for a detailed description of the procedures. These pages also outline the Appeals process regarding Academic Misconduct.

Students facing a charge of academic or non-academic misconduct may choose to contact the University of Winnipeg Students' Association (UWSA) where a student advocate will be available to answer any questions about the process, help with building a case, and ensuring students have access to support. For more information or to schedule an appointment, visit our website at [www.theuwsa.ca/academic-advocacy](http://www.theuwsa.ca/academic-advocacy) or call 204-786-9780.

## **VOLUNTARY WITHDRAWAL**

**\*\*You must formally withdraw from a course. If you simply stop going to classes, you may receive an “F” on your transcript.**

Please note that withdrawing before the VW date does not necessarily result in a fee refund.

*Please note the following deadline dates for voluntary withdrawal from Biology Courses:*

(For courses May 1 – May 29) Tuesday, May 22, 2018

(For courses May 31 – June 27) Wednesday, June 20, 2018

(For courses May 1 – June 12) Thursday, May 31, 2018

(For courses May 1 – June 27) Wednesday, June 13, 2018

- Students with documented disabilities, temporary or chronic medical conditions, requiring academic accommodations for tests/exams (e.g., private space) or during lectures/laboratories (e.g., note-takers) are encouraged to contact Accessibility Services (AS) at 786-9771 or [accessibilityservices@uwinnipeg.ca](mailto:accessibilityservices@uwinnipeg.ca) to discuss appropriate options. All information about a student’s disability or medical condition remains confidential  
<http://www.uwinnipeg.ca/accessibility>
- Students who plan to conduct research interviews, focus groups, surveys, or any other method of collecting data from any person, even a family member, must obtain the approval of the appropriate ethics committee before commencing data collection. Exceptions are research activities in class as a learning exercise. See <http://www.uwinnipeg.ca/research/human-ethics.html> for submission requirements and deadlines.
- All students, faculty and staff have the right to participate, learn and work in an environment that is free of harassment and discrimination. The UW Respectful Working and Learning Environment Policy may be found online at [www.uwinnipeg.ca/respect](http://www.uwinnipeg.ca/respect).
- Students may choose not to attend classes or write examinations on holy days of their religion, but they must notify their instructors at least two weeks in advance. Instructors will then provide opportunity for students to make up work examinations without penalty. A list of religious holidays can be found at <http://uwinnipeg.ca/academics/calendar/docs/important-notes.pdf>
- UWinnipeg promotes a scent-free environment. Please be respectful of the needs of classmates and the instructor by avoiding the use of scented products while attending lectures. Exposure to perfumes and other scented products (such as lotion) can trigger serious health reactions in persons with asthma, allergies, migraines or chemical sensitivities.