# Course Outline Form: Winter 2016

## General Information

**Course Title:** ENVS\*3270Forest Biodiversity

**Course Description:**

This course examines biodiversity in forest ecosystems at a variety of scales from genes to landscapes. Relationships between biodiversity and forest ecosystem structure, function, and stability are explored. Approaches to conserving biodiversity in managed forests are discussed and evaluated. Analysis of the relevant scientific literature and practical experience with methods of quantifying biodiversity are emphasized in the weekly seminar.

**Credit Weight:** 0.50

**Academic Department (or campus):** School of Environmental Sciences

**Campus:** Guelph

**Semester Offering:** Winter 2016

**Class Schedule and Location:** Lectures Monday, Wednesday, 1:30 – 2:20, MCKN 223

Seminar Monday, 3:30 – 5:20, MCKN 226

## Instructor Information

Instructor Name: Professor Andrew M. Gordon, B.Sc.F., Ph.D., R.P.F.

Instructor Email: [agordon@uoguelph.ca](mailto:agordon@uoguelph.ca)

Office location and office hours: ALEX 121C; no set hours – make appointment as required

## GTA Information

GTA Name: Ms. Deanna Walter, M.Sc. Candidate, SES

GTA Email: [dwalter@uoguelph.ca](mailto:dwalter@uoguelph.ca)

GTA office location and office hours: Room 111, Alexander Building; Office Hours TBA

## Course Content

### Specific Learning Outcomes:

By the end of the semester, successful students will be able to

1. Define  biodiversity as it is found in global forest ecosystems and describe its  many  aspects  (e.g. genetic,  species,  ecosystem,

 structural, etc.) through in-class discussion, independent study and group projects.

1. Answer  some  fundamental  questions  related  to  biodiversity  in forest ecosystems (e.g. Why does biodiversity vary in different environments? How is biodiversity maintained? How is biodiversity related to forest structure, function and stability?) through in-class discussion, independent study and group projects.
2. Employ different methods of biodiversity quantification in forest ecosystems through two question-specific seminar exercises.
3. Discuss approaches to conserving biodiversity in forests, through in-class discussion, independent study and group projects.
4. Identify the important literature focusing on controversies related to forest biodiversity

through background study and the oral presentation of the issue in the form of a debate.

1. Integrate acquired knowledge on forest biodiversity and the synthesis of current

literature through a written report on current topics on forest biodiversity.

### Lecture Content:

Week Lecture Topics

1,2 Introduction, Forestry 101, Forest Ecology 101

Basics of biodiversity; definitions, basic concepts, history

Current state of global biodiversity

Importance of forests to global biodiversity

3, 4 Why are some forests more diverse than others?

How is biodiversity created and maintained in forests?

How does biodiversity influence ecosystem functioning?

5 Forest biodiversity at the stand level (species diversity, structural diversity, genetic diversity, approaches to conserving stand-level biodiversity in forests)

READING WEEK

6, 7, 8, 9 Forest biodiversity at the stand level, continued

10, 11, Forest biodiversity at the ecosystem and landscape levels

12 (forest mosaics, forest edges, islands and fragments)

Conserving landscape-level biodiversity in forests

13 Case studies, wrap-up, exam review

### Labs: None.

### Seminars:

Week Content

1 No Seminar

2 Assigned Reading

Articles/Discussion

3 Methods – species diversity

4 Assigned Reading

Articles/Discussion

5 Methods – structural diversity

6 READING WEEK

7 TBD

8 Midterm (February 29)

9-12 Student presentations/Debates

13 Exam review

### Course Assignments and Tests:

| **Assignment or Test** | **Due Date** | **Contribution to Final Mark (%)** | **Learning Outcomes Assessed** |
| --- | --- | --- | --- |
| **Data Analysis Assignments** | **February 7**  **February 22** | **10% (2, each worth 5%)** | **3** |
| **Midterm** | **February 29** | **20%** | **1, 2, 3, 4** |
| **Group Presentations/Debates** | **Variable – Starting March 7** | **25%** | **2, 4, 5** |
| **Paper** | **April 4** | **25%** | **2, 3, 4, 6** |
| **Final Exam\*\*** | **April 18** | **20%** | **1, 2, 3, 4** |

Additional Notes (if required):

\*\* May be substituted with Final Take Home Exam – details TBA in class.

### Final examination date and time: Monday, April 18, 11:30-1:30

### Final exam weighting: 20%

## Course Resources

### Required Texts: There is no required text.

### Recommended Texts:

Some readings will be assigned from this text. It is available on-line at http:// books.scholarsportal.info/viewdoc.html?id=/ebooks/

ebooks2/springer/2011-­‐04-­‐28/2/3540265996

Scherer-Lorenzen, M., C. Korner and E. D. Schulze. 2005. Forest diversity and function: temperate and boreal systems. Ecological Studies, Vol. 176, Springer. ISBN:  3540221913.

A PDF will also be available on Courselink.

### Lab Manual: None.

### Other Resources: Posted lecture notes, posted research papers.

### Field Trips: None.

### Additional Costs: None.

## Course Policies

### Grading Policies:

Assignments are due at the beginning of class on the date shown above, with the exception of the paper which is due by 23:59 on April 4. If suitable documentation regarding illness, personal stress, family grievance, etc. is not provided, marks will be deducted at a rate of 10% (of the assignment’s value) per day for a period of 1 week, after which they will not be accepted. Please inform the instructor in advance if you are unable to submit an assignment or attend a mid-term, seminar, or exam.

### Course Policy on Group Work:

For group work, the individuals in each group must be clearly designated. One assignment turned in per group is acceptable. It is assumed that all group members contributed equally to the submission. Nonetheless, peer evaluation will be undertaken at the end of the course.

### Course Policy regarding use of electronic devices and recording of lectures:

Electronic recording of classes is expressly forbidden without consent of the instructor. When recordings are permitted they are solely for the use of the authorized student and may not be reproduced, or transmitted to others, without the express written consent of the instructor.

## University Policies

### Academic Consideration:

The University of Guelph is committed to supporting students in their learning experiences and responding to their individual needs and is aware that a variety of situations or events beyond the student's control may affect academic performance. Support is provided to accommodate academic needs in the face of personal difficulties or unforeseen events in the form of Academic Consideration.

Information on regulations and procedures for Academic Consideration, Appeals and Petitions, including categories, grounds, timelines and appeals can be found in [Section VIII (Undergraduate Degree Regulations and Procedures) of the Undergraduate Calendar](https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml).

### Academic Misconduct:

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community, faculty, staff, and students to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring.

University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection. Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

Detailed information regarding the Academic Misconduct policy is available in [Section VIII (Undergraduate Degree Regulations and Procedures) of the Undergraduate Calendar](https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml).

### Accessibility:

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact the Student Accessibility Services (SAS), formerly Centre for Students with Disabilities (CSD), as soon as possible.

For more information, contact SAS at 519-824-4120 ext. 56208 or email sas@uoguelph.ca or visit the [Student Accessibility Services website (http://www.uoguelph.ca/csd/)](http://www.uoguelph.ca/csd/).

### Course Evaluation Information:

End of semester course and instructor evaluations provide students the opportunity to have their comments and opinions used as an important component in the Faculty Tenure and Promotion process, and as valuable feedback to help instructors enhance the quality of their teaching effectiveness and course delivery.

While many course evaluations are conducted in class others are now conducted online. Please refer to the [Course and Instructor Evaluation Website](https://courseeval.uoguelph.ca/) **for more information.**

### Drop period:

The drop period for single semester courses starts at the beginning of the add period and extends to the Fortieth (40th) class day of the current semester (the last date to drop a single semester courses without academic penalty) which is listed in [Section III (Schedule of Dates) of the Undergraduate Calendar](https://www.uoguelph.ca/registrar/calendars/).

The drop period for two semester courses starts at the beginning of the add period in the first semester and extends to the last day of the add period in the second semester.

Information about Dropping Courses can be found in [Section VIII (Undergraduate Degree Regulations and Procedures) of the Undergraduate Calendar](https://www.uoguelph.ca/registrar/calendars/undergraduate/current/).

## Additional Course Information

**Social Networking:**

The use of computers to take notes in class is allowed. The use of computers in class for any other purpose, including emails and social networking is not allowed. Individuals caught doing the latter will be barred from class.