

**ENVS\*3270 Forest Biodiversity Winter 2018**

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. Analyses of the relevant scientific literature and practical experience with methods of quantifying biodiversity are emphasized in seminars.

Instructor

Dr. Virginia Capmourteres Bovey Building, Room 2124 vcapmour@uoguelph.ca

GTAs

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Lectures

Mondays and Wednesdays, 1:30 pm to 2:20 pm, MCKN Room 031.

Seminars

ENVS\*3270\*0101: Thursdays, 3:30 pm to 5:20 pm, MCKN Room 306; ENVS\*3270\*0102: Tuesdays, 3:30 pm to 5:20 pm, MCKN Room 306; and, ENVS\*3270\*0103: Thursdays, 3:30 pm to 5:20 pm, MCKN Room 318.

Requisite courses

One of BIOL\*2060, BOT\*3050, or ENVS\*2330.

Office hours

Office hours by appointment only. Please see the instructor immediately after class or contact her via e-mail to set up an appointment.

Course material

* Recommended text, available online through the University Library: Scherer---­‐‑Lorenzen, M., Körner, C. & Schulze, E. D. Forest diversity and function: temperate and boreal systems. Ecological Studies, Volume 176. Springer 2005. ISBN: 3540221913; and,
* Scientific papers as provided by the instructor.

CourseLink

* The instructor uses CourseLink for posting class announcements, seminar handouts, papers, slides from lectures, grades and other relevant materials to this course. Please check this site often.

Learning outcomes

1. To deﬁne biodiversity and to describe its many components and scales;
2. To gain insight and to be able to discuss the drivers of biodiversity in forests and its importance for the maintenance of forest structure, function, and stability;
3. To identify and to apply a variety of methods for the quantification of biodiversity in forests;
4. To critically judge the suitability of approaches to conserving biodiversity in forests at the stand and landscape scale;
5. To integrate, synthesize, and orally present current scientific literature regarding controversies in forest biodiversity and conservation; and,
6. To be able to provide a quali and quantitative assessment of forest health and complexity.

Lectures schedule

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| Date | Topic |
| Monday, January 8th | Introduction, course presentation |
| Wednesday, January 10th | Basics of biodiversity: definitions, history |
| Monday, January 15th | Current state of global biodiversity; importance of forests to global biodiversity |

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| Date | Topic |
| Wednesday, January 17th | Why are there so many species? Part I |
| Monday, January 22nd | Why are there so many species? Part II |
| Wednesday, January 24th | Why are there so many species? Part III |
| Monday, January 29th | Biodiversity and ecosystem functioning and stability |
| Wednesday, January 31st | Biodiversity and productivity |
| Monday, February 5th | Seminar 3: Dairy bush I |
| Wednesday, February 7th | Seminar 3: Dairy bush II |
| Monday, February 12th | Forest structure and function I |
| Wednesday, February 14th | Forest structure and function II |
| Monday, February 19th | Winter break |
| Wednesday, February 21st |
| Monday, February 26th | Midterm part I: in class |
| Wednesday, February 28th | Midterm part II: online quiz |
| Monday, March 5th | Forest conservation: protected areas |
| Wednesday, March 7th | Stand-level management I |
| Monday, March 12th | Stand-level management II |
| Wednesday, March 14th | Stand-level management III |
| Monday, March 19th | Landscape-level management I |
| Wednesday, March 21st | Landscape-level management II |
| Monday, March 26th | Forest health |
| Wednesday, March 28th | Forest complexity |
| Monday, April 2nd | Consultation and revision for final exam |
| Wednesday, April 4th | Consultation and revision for final exam |

Seminars schedule

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| Week of… | Topic |
| January 8th | No seminar |
| January 15th | Seminar 1: Diversity indices, species-area curves, abundance ranks- explanation |
| January 22nd | Seminar 1: Diversity indices, species-area curves, abundance ranks- assessment |
| January 29th | Seminar 2: Oral presentation and discussion- forest threats |
| February 5th | Seminar 2: Oral presentation and discussion- forest threats |
| February 12th | Seminar 2: Oral presentation and discussion- forest threats |
| February 19th | Winter break |
| February 26th | Seminar 3: Woody debris- data analysis |
| March 5th | Seminar 4: Documentary- in class screening |
| March 12th | No seminar |
| March 19th | No seminar |
| March 26th | Seminar 5: Forest health assessment |
| April 2nd | No seminar |

Course evaluation

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| Evaluation method | Due date | Contribution to final mark (%) | Learning outcomes assessed |
| Seminar 1 | Sunday, January 28th at 11:59 pm | 10 | 1, 2, 3 |
| Seminar 2 | On your respective day of presentation; submit presentation to CourseLink by Sunday, February 18th at 11:59 pm | 10 | 2, 4, 5 |
| Midterm | Week of February 26th | 30 | 1, 2, 3, 5 |
| Seminar 3 | Sunday, March 11th at 11:59 pm | 10 | 2, 3 |

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| Evaluation method | Due date | Contribution to final mark (%) | Learning outcomes assessed |
| Seminar 4 | Sunday, March 18th at 11:59 pm | 5 | 4, 5 |
| Seminar 5 | Sunday, April 1st at 11:59 pm | 5 | 6 |
| Final exam | Wednesday, April 11th, 8:30-10:30 am | 30 | 1, 2, 3, 4, 5, 6 |

Policy on late assignments

Assignments are to be submitted through CourseLink on the day specified above. Late submissions, for which an extension has not been granted ahead of time, will lose 10% of the total marks for every day (or part thereof) that it is late. If you require an extension on an assignment, you must have a valid reason and contact Dr. Capmourteres in advance of the due date.

Course policy on group work

Students may discuss with each other any aspect of the course material, course assignments, and readings. For all assignments conducted during the seminars, discussions among students are encouraged. For submissions, however, seminars 2, 4, and 5 are to be designed, prepared, and presented in group. Seminars 1 and 3 should be entirely design, prepared, and written by each student individually. For group activities, the students in the group are responsible of ensuring all students participate equitably on their assignment. In case a student is not able to commit to their group activity due to major circumstances, someone in the group please email Dr. Capmourteres at least two days before the assignment’s due date.

Copies of out-of-class assignments

Keep paper and/or other reliable electronic back---­‐‑up copies of all out---­‐‑of---­‐‑class assignments. You may be asked to resubmit work at any time.

Academic misconduct statement

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, sta!, and

students— to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic o!ences 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, sta! 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 o!ence should consult with a faculty member or faculty advisor.

The University expects that you are familiar with the University’s policy on Academic Misconduct (https://[www.uoguelph.ca/registrar/calendars/undergraduate/2017-2018/c08/c08-](http://www.uoguelph.ca/registrar/calendars/undergraduate/2017-2018/c08/c08-) amisconduct.shtml, https://[www.uoguelph.ca/registrar/calendars/undergraduate/2017-](http://www.uoguelph.ca/registrar/calendars/undergraduate/2017-) 2018/c08/c08-amisconductpen.shtml) and that you will conduct yourself in an appropriate manner. We do not accept “I didn’t know” as an excuse. We take this seriously. We expect that you will have completed the tutorial and taken the self---­‐‑test available here and that you understand all of the answers: https://academicintegrity.uoguelph.ca/.

Academic consideration

When you ﬁnd yourself unable to meet an in---­‐‑course requirement because of illness or compassionate reasons, please advise Dr. Capmourteres in writing, with your name, id#, and e---­‐‑mail contact. See the undergraduate calendar for information on regulations and procedures for Academic Consideration: https://[www.uoguelph.ca/registrar/calendars/undergraduate/current/pdffiles/calendar.pdf](http://www.uoguelph.ca/registrar/calendars/undergraduate/current/pdffiles/calendar.pdf)

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 Students Accessibility Services as soon as possible. For more information, visit https://wellness.uoguelph.ca/accessibility/

Recording of materials

Presentations which are made in relation to course work —including lectures— cannot be recorded or copied without the written permission of the presenter, whether the instructor, a classmate, or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

Course evaluations

Course evaluations will take place in class, near the end of the semester. The School of Environmental Sciences takes student feedback seriously. The SES Director sees all student feedback and discusses this feedback with the faculty where appropriate. Numerical scores and *signed* student comments are reviewed by the School’s Tenure & Promotion Committee, and are considered in our evaluation of the faculty member for the granting of tenure, advancement in rank, and performance related salary increases. This committee will NOT see comments that are not signed by the student. *Faculty members are not able to access their own teaching evaluations until after their ﬁnal grades are submitted to the registrar.*