

Biology 4412G Course Outline

1. Course Information

Course Information

Biology 4412G – Biodiversity Science

Lectures: Tuesday, 1:30 pm – 3:30 pm (In-person; UWO-123).

Tutorials: Tuesday, 3:30 pm – 5:30 pm (In-person; UWO-123).

(Lectures, tutorials and discussions are integrated; times above are a general outline)

List of Prerequisites

Biology 2244A – Biostatistics with a minimum 60%.

At least one of: Biology 3440A/B (Population Ecology), Biology 3442F/G (Conservation Biology), Biology 3445F/G (Community Ecology).

Unless you have either the requisites for this course or written special permission from your Dean's Designate (Department/Program Counsellors and Science Academic Advisors) 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.

2. Instructor Information

Instructors	Email
Dr. Professor	professor@uwo.ca

Students must use their Western (@uwo.ca) email addresses when contacting their instructors. Please put '4412' at the beginning of the subject for all email correspondence, including to your TA. Please note, we cannot guarantee response to questions in the 24-hour period prior to assignment deadlines.

3. Course Syllabus, Schedule, Delivery Mode

Biodiversity science is an emerging and highly integrative field of research dealing with all aspects of biological diversity. This course will address approaches and techniques for the measurement, assessment, monitoring, and management of biodiversity from genes to ecosystems.

As a capstone course to Western Biology's Biodiversity and Conservation Honour's Specialization, we will build on core ecological theories from population ecology, conservation principles, community ecology, and ecosystem management. We incorporate social, ecological, and evolutionary perspectives to understand the causes and consequences of biodiversity loss, and the socio-economics of biodiversity change. Students are expected to engage highly with course content in a way that synthesises their core ecological knowledge.

As a result of attending integrative lectures / tutorials and successful completion of assigned course work including projects and/or discussions, students should be able to:

- Articulate verbally and in writing what biodiversity is and the transdisciplinary nature of biodiversity science
- Articulate verbally and in writing the challenges facing the conservation of biodiversity
- Articulate verbally and in writing the dependence of human societies on biodiversity
- Read and critically evaluate scientific or policy literature on biodiversity
- Collate, manage and analyse biodiversity data
- Interpret statistical results as outputs of statistical analyses and in primary scientific literature
- Relate fundamental ecological principles (from both this, and prerequisite courses) to biodiversity concepts and issues
- Contribute substantively and collaboratively to group project documents and/or presentations

Lecture Schedule

Classes begin: January 6, 2024

Winter Term Reading Week: February 17 – February 21, 2014

Classes end: April 4, 2024

Contingency plan

Although the intent is for this course to be delivered in person, should any university-declared emergency require some or all of the course to be delivered online, either synchronously or asynchronously, the course will adapt accordingly. The grading scheme will **not** change. Any assessments affected will be conducted online as determined by the course instructor.

4. Course Materials

Students are responsible for checking the course Brightspace site 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. All course material will be posted to Brightspace, including assigned reading materials. There is no textbook for this course.

If students need assistance with the course Brightspace site, they can seek support on the Brightspace Help page. Alternatively, they can contact the Western Technology Services Helpdesk. They can be contacted by phone at 519-661-3800 or ext. 83800.

Technical Requirements

For tutorials working with data and performing statistical analyses, you must have access to a (laptop) computer with the following:

- Office suite with Word, Excel
- The statistical software R (<https://cran.r-project.org/>) and RStudio (<https://rstudio.com/products/rstudio/download/>). Both are available for free. Please ensure that you have administrator access for your computer as you will need to install different R packages for different labs. **Note:** tablets are not functional computers for these labs.

5. Methods of Evaluation

This class is divided into a formal lecture (most classes), and various in-class activities, including discussions of primary literature, data management and analysis, as well as some group work. Additionally, this course is 4 hours once per week; one missed class is a substantial portion of the course! For this reason, it is important that students attend all lectures/tutorials.

Grading Scheme and Assessment Dates

The overall course grade will be calculated as listed below (and see footnote 10 and 11):

Assessment type	Due date	Assessment value
In-class quiz	Jan 7, 2024	5%
Data analysis (×3)	In class	20%
Annotated bibliography (×2)	Various	30%
Midterm	Feb 25, 2024	20%
Group debate	Apr 1, 2024	10%
Final assignment	Apr 1, 2024	15%

General information about missed coursework

Students must familiarize themselves with the *University Policy on Academic Consideration – Undergraduate Students in First Entry Programs* posted on the Academic Calendar:

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/academic_consideration_Sep24.pdf,

This policy does not apply to requests for Academic Consideration submitted for **attempted or completed work**, whether online or in person.

The policy also does not apply to students experiencing longer-term impacts on their academic responsibilities. These students should consult [Accessible Education](#).

For procedures on how to submit Academic Consideration requests, please see the information posted on the Office of the Registrar’s webpage:

https://registrar.uwo.ca/academics/academic_considerations/

All requests for Academic Consideration must be made within 48 hours after the assessment date or submission deadline.

All Academic Consideration requests must include supporting documentation; however, recognizing that formal documentation may not be available in some extenuating circumstances, the policy allows students to make one Academic Consideration request **without supporting documentation** in this course. However, the following assessments are excluded from this, and therefore always require formal supporting documentation:

- Midterm test
- Final term report

When a student *mistakenly* submits their one allowed Academic Consideration request **without supporting documentation** for the assessments listed above or those in the **Coursework with Assessment Flexibility** section below, the request cannot be recalled and reapplied. This privilege is forfeited.

6. Additional Statements

Religious Accommodation

When conflicts with a religious holiday that requires an absence from the University or prohibits certain activities, students should request an accommodation for their absence in writing to the course instructor and/or the Academic Advising office of their Faculty of Registration. This notice should be made as early as possible but not later than two weeks prior to the writing or the examination (or one week prior to the writing of the test).

Please visit the Diversity Calendars posted on our university's EDID website for the recognized religious holidays:

<https://www.edi.uwo.ca>.

Accommodation Policies

Students with disabilities are encouraged to contact Accessible Education, which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The policy on Academic Accommodation for Students with Disabilities can be found at:

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Accommodation_disabilities.pdf.

Academic Policies

The website for Registrar Services is <https://www.registrar.uwo.ca/>.

In accordance with policy,

https://www.uwo.ca/univsec/pdf/policies_procedures/section1/mapp113.pdf,

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 their official university address is attended to in a timely manner.

Electronic devices are not required (e.g. calculators) nor permitted on tests or quizzes.

Professionalism & Conduct

Western students are expected to follow the [Student Code of Conduct](#). All course materials created by the instructor(s) are copyrighted and cannot be sold/shared, and recordings are not permitted (audio or video).

In this course, my aim is to foster a professional teamwork environment where students cultivate skills in creativity, synthesize the knowledge acquired at Western, and critically evaluate information presented to them. Emphasizing a reciprocal learning model, students will both receive and provide peer feedback, creating a collaborative environment that prepares them for the challenges of their future careers in biology. Please be courteous and respectful in providing feedback to others by focusing on the goals of the course and course content.

In this class we will follow the THINK before you speak model.

Before you speak ask yourself is it:

T = true

H = helpful

I = inspiring

N = necessary

K = kind

We strive to cultivate an atmosphere that values the unique contributions of each member. In this learning community, we unequivocally affirm our commitment to fostering a diverse, equitable, and

inclusive environment. Creating this culture requires attention to six values: honesty, trust, fairness, respect, responsibility, and courage. Any form of disrespect towards individuals based on their identity will not be tolerated.

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:

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf.

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>).

Plagiarism

Biology 4412G is an essay-based course. Students must write their assignments in their own words.

Whenever students take an idea, or a passage from another author, they must acknowledge their debt by using quotation marks where appropriate (rare in science) and/or by properly paraphrasing and appropriately citing the source of the information. You are expected to know what plagiarism is at this stage of your programme. All required written work will 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>).

Generative AI use

In this course, we recognize the potential benefits of generative AI to support your learning; however, the use of generative AI can detract from learning of key knowledge and skills, particularly skills where it's important for you to accomplish a task unassisted. Each assignment will clearly outline the expectations and restrictions around generative AI use for that assignment. Violating the acceptable use of generative AI stated in your assignment requirements may result in academic penalties as laid out in Western University's academic integrity and scholastic offensive policies.

Support Services

Please visit the Science & Basic Medical Sciences Academic Advising webpage for information on adding/dropping courses, academic considerations for absences, appeals, exam conflicts, and many other academic-related matters: <https://www.uwo.ca/sci/counselling/>.

Students who are in emotional/mental distress should refer to Mental Health@Western (<https://uwo.ca/health/>) for a complete list of options about how to obtain help.

Western is committed to reducing incidents of gender-based and sexual violence and providing compassionate support to anyone who has gone through these traumatic events. If you have experienced sexual or gender-based violence (either recently or in the past), you will find information about support services for survivors, including emergency contacts at

https://www.uwo.ca/health/student_support/survivor_support/get-help.html.

To connect with a case manager or set up an appointment, please contact support@uwo.ca.

Please contact the course instructor if you require lecture or printed material in an alternate format or if any other arrangements can make this course more accessible to you. You may also wish to contact Accessible Education at

http://academicsupport.uwo.ca/accessible_education/index.html

if you have any questions regarding accommodations.

Learning-skills counsellors at Learning Development and Success (<https://learning.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.

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