



**Western
Science**

Department of Biology

**BIOLOGY 2485B
Environmental Biology
Winter 2026**

COURSE OUTLINE

1. Course Information

Lectures:

See syllabus on course web page

Tutorials:

Prerequisites

Either Biology 1001A or Biology 1201A, and either Biology 1002B or Biology 1202B, or Integrated Science 1001X.

Unless you have either the requisites for this course or written special permission from the Department of Biology to enroll in it, you may be removed and withdrawn from this course in accordance with university policy. This may be done after the add/drop deadline of the academic term, and the course will be marked as withdrawn (WDN) on your academic record. This decision may not be appealed.

2. Instructor Information

Dr. Vera Tai

e-mail: vtai4@uwo.ca
office:
office hours:

Teaching Assistants:

Sections	TA	E-mail address
005, 006, 007, 011, 014	TBA	
002, 008	TBA	
003, 009, 012	TBA	
004, 010	TBA	

3. Course Syllabus, Schedule, and Delivery Mode

Course Description: Basic principles of environmental biology, human ecology, ecosystem structure and function. Human population growth and its impact on soil, water, energy, agriculture and natural populations of plants and animals. Environmental problems created by resource exploitation and possible solutions.

Learning Objectives

By the end of this course, you should be able to:

1. To develop a basic scientific understanding of important current environmental issues from a biological point of view. In this course you will hear, read about and discuss some of the most important environmental topics of our time, including: Human population growth, Ecosystems, Biodiversity, Water resources, Energy resources
2. To understand and summarize articles from the scientific literature on environmental biology.
3. To effectively communicate scientific research through a live presentation.

Course Syllabus and Schedule

The lecture topics presented below are *tentative* and may change as the semester develops. There may be periodic readings in support of the lecture material from online resources on OWL. Tutorials are every second week. Students in sections 002-007 will attend in the first week of a rotation, and students in sections 008-014 will attend in the second week of a rotation. Attendance to each tutorial is mandatory, even when you are not scheduled to present.

Dates	Lecture Topics	Tutorial Topics	Reflection Due Dates
week 1 Jan. 6 & 8	Introduction. Valuing Environmental Processes	No tutorial	
week 2 Jan. 13 & 15	Human Population Growth Terrestrial Environments	No tutorial	#1 - Jan 15 Question
week 3 Jan. 20 & 22	Terrestrial Diversity Marine Environments	Tutorial Introduction (sections 002 - 007)	#1 - Jan 20 Responses
week 4 Jan. 27 & 29	Marine Diversity Atmospheric Processes	Tutorial Introduction (sections 008 - 014)	#2 - Jan 29 Question
week 5 Feb. 3 & 5	Atmospheric Pollution Global Climate Change Processes I	#1 Diversity (002-007)	#2 - Feb 3 Responses
week 6 Feb. 10 & 12	Global Climate Change Processes II Global Climate Change Consequences I	#1 Diversity (008-014)	#3 -Feb 12 Question
Week of Feb. 16	Reading Week	No tutorial	
week 7 Feb. 24 & 26	Global Climate Change Consequences II Conventional Energy Resources I	#2 Climate Change (002-007)	#3 -Feb 24 Responses
SAT. Feb. 28	Midterm, 1:00 to 3:00 pm, location TBA		

Dates	Lecture Topics	Tutorial Topics	Reflection Due Dates
week 8 Mar. 3 & 5	Conventional Energy Resources II Alternative Energy Resources I	#2 Climate Change (008-014)	
week 9 Mar. 10 & 12	Alternative Energy Resources II Soil Resources	#3 Energy (002-007)	#4 -Mar 12 Question
week 10 Mar. 17 & 19	Green Revolution Parasites, Invasive Species	#3 Energy (008-014)	#4 -Mar 17 Responses
week 11 Mar. 24 & 26	Forestry Mining	#4 Food, Forestry, Mining (002-007)	
week 12 Mar. 31 & Apr. 2	Freshwater Resources	#4 Food, Forestry, Mining (008-014)	#5 -Apr 2 Question
week 13 Apr. 7 & 9	Course Summary		#5 - Apr 7 Responses
scheduled by the Registrar, April 12-30	Final Exam, time and location TBA		

Delivery Mode - all classes, tutorials, and labs are in person

4. Course Materials

Recommended Text:

J Withgott, M Laposata, B Murck. 2017. **Environment: The Science Behind the Stories**. Third Canadian Edition. Pearson Canada. Toronto, Canada.

The textbook costs \$75.00 and is recommended. Nothing on the tests will be on material that was not covered in lecture, but you may appreciate having another learning resource available. An electronic version of the textbook can be ordered through the UWO bookstore or by following this link: https://bookstore.uwo.ca/textbook-search?campus=UWO&term=W2025B&courses%5B0%5D=001_UW/BIO2485B

Required Online Platform: Packback (<https://app.packback.ca/>)

Packback costs \$39.00 and is required. Packback is a software package that will allow you to explore your curiosity on class topics. Five times throughout the semester, students are expected to contribute to the online community by asking open-ended questions, providing opinions, and by building upon knowledge covered in class. An invitation to join Packback will be sent to students' UWO email addresses by help@packback.co on January 7. If you did not receive the email, please check

your Spam filter or your trash folder. If you do not see it in either folder, email your instructor.

Course site: on OWL (<https://westernu.brightspace.com/>)

All course material will be posted to OWL. Students are responsible for checking the course OWL site (<https://westernu.brightspace.com/>) regularly for news and updates. This is the primary method by which information will be disseminated to all students in the class.

If students need assistance, they can seek support on the [OWL 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

- ✓ stable internet connection
- ✓ PowerPoint or other means to create slide presentations

5. Methods of Evaluation

Grading Scheme and Assessment Dates

The overall course grade will be calculated as listed below:

Course Component	Weight	Description
Reflections (5)	15%	Discussions on Packback assigned every 2-3 weeks that reflect on 5 main topics: Introduction, Diversity, Climate change, Energy, and Natural resources. For due dates, see below.
Presentation	20%	Individual presentation during scheduled tutorial times Presentation schedule to be determined on the first tutorial day
Presentation Participation	5%	Attendance and participation at tutorial sessions. Participation during presentation question periods. Providing feedback on presentations through OWL.
Midterm Test	25%	multiple choice Saturday February 28, 1:00 pm - 3:00 pm, location TBA make-up: Thursday March 5, 7 - 9:00 pm
Final Exam	35%	multiple choice and short answer scheduled by the Registrar

Reflections

Students will contribute to discussions on 5 topics throughout the course using the PackBack forum. For each topic, each student will post one discussion question, and respond to 2 others posted by their classmates. These will be evaluated based on PackBack's curiosity score and the depth and thoughtfulness of your posts. Students will receive AI-based suggestions for writing style, but **not** generative AI, through the Packback software package. Further details on completing these reflections and how they will be evaluated will be provided in class.

The due dates for these reflections are as follows:

Topic	Question Due Date	Responses Due Date
Introduction to Biology and the Environment	Thursday, January 15	Tuesday, January 20
Diversity	Thursday, January 29	Tuesday, February 3
Pollution and Climate Change	Thursday, February 12	Tuesday, February 24
Energy	Thursday, March 12	Tuesday, March 17
Natural Resources	Thursday April 2	Tuesday, April 7

Presentation

Students will present once in the term at a tutorial session. Students will prepare and present a 12 minute presentation based on a published scientific research paper that addresses one of 4 main topics covered in this class: Diversity, Climate Change, Energy, or Natural Resources. The presentation topic will be assigned during the tutorial introduction, and further details on the presentation and its evaluation will be provided at that time.

Presentation Participation

Participation will be evaluated based on attendance at the tutorial sessions, asking questions after presentations, and providing peer feedback of presentations.

Midterm Test

The midterm test will consist of multiple choice questions, evaluating course material covered before Reading Week.

Final Exam

The final exam will consist of multiple choice and short-answer questions, and will be scheduled by the registrar. The final exam will evaluate course material covered over the entire term. This is a mandatory component of this course.

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:

- Final Exam scheduled during official examination periods
- Midterm

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.

Evaluation Scheme for Missed Assessments

Reflections

When a student misses the No-Late-Penalty Period to submit a discussion question or response, and their Academic Consideration has been granted, they will receive an extended deadline based on their academic consideration. When Academic Consideration has not been granted, a late penalty of 20% per day will be applied to each late question or response.

Presentation

When a student misses their presentation date and their Academic Consideration has been granted, the presentation will be re-scheduled without penalty. When Academic Consideration has not been granted, a late penalty of 30% will be applied, and the

presentation will be re-scheduled. **The student must contact their TA to re-schedule their presentation as soon as possible.** Please note that if needed, the re-scheduled date may occur during the Study Days or April Exam Period.

Presentation Participation

When a student misses a tutorial session and their Academic Consideration has been granted, there is no penalty. When a student misses a tutorial session without Academic Consideration, marks will be deducted as follows: -0.5 for 1 session missed, -1.5 for 2 sessions missed, -3.5 for 3 sessions missed, -5 for 4 sessions missed.

Midterm

When a student misses the Midterm and their Academic Consideration has been granted, they are eligible to write the make-up (scheduled for March 7th at 3 pm). If the student then misses the make-up Midterm, they must seek Academic Consideration again. If this Academic Consideration is granted, then the weight of the mid-term will be transferred to the Final Exam (i.e. the final exam will be worth 65%).

Final Exam

When a student misses the Final Exam and their Academic Consideration has been granted, they will be allowed to write the Special Examination (the name given by the University to a makeup Final Exam). See the Academic Calendar for details (under [Special Examinations](#)), especially for those who miss multiple final exams within one examination period.

Essential Learning Requirements

Even when Academic Considerations are granted for missed coursework, the following are deemed essential to earn a passing grade.

- completion of the Presentation
- completion of the Final Exam

Students not meeting these requirements will receive a maximum grade of 45.

Coursework with Assessment Flexibility

By policy, instructors may deny Academic Consideration requests for the following assessments with built-in flexibility:

Deadline with a No-Late-Penalty Period

Reflections. Students are expected to submit each of the 5 Reflection assignments (question post and reflections) by the deadline listed. Should extenuating circumstances arise, students do not need to request Academic Consideration and they are permitted to submit their assignment up to 48 hours past the deadline

without a late penalty. Should students submit their assessment beyond 48 hours past the deadline, a late penalty of 20% per day will be applied. Academic Consideration requests may be granted only for extenuating circumstances that started before the deadline and lasted longer than the No-Late-Penalty Period (48 hours).

6. Additional Statements

6.1 Religious Accommodation

When a recognized religious holiday or observance conflicts with an examination, test, or other scheduled academic obligation, students must request accommodation via the University's Student Absence Portal (SAP). This request should identify the conflict and specify which course component(s) (e.g. test, midterm, exam) are affected.

Students are encouraged to submit the SAP request as early as possible, but no later than two weeks before any examination, or one week before any mid-term test or quiz, to allow sufficient time for adjustment.

The SAP request serves as official notification to both the course instructor and the Academic Advising Office, in accordance with University policy: https://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_religious.pdf

The Faculty of Science considers religious accommodations as scheduling conflicts. Instructors should provide either a make-up exam or an earlier sitting of the same exam to accommodate the student.

For more information on recognized religious holidays, please visit the Diversity Calendar posted on the Equity, Diversity & Inclusion website - <https://www.edi.uwo.ca>

6.2 Academic 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

6.3 General Academic Policies

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

Use of @uwo.ca email: 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 his/her official university address is attended to in a timely manner.

Requests for Relief (formally known as “appeals”)

Policy on Request for Relief from Academic Decision:
https://uwo.ca/univsec//pdf/academic_policies/appeals/requests_for_relief_from_academic_decisions.pdf

Procedures on Request for Relief from Academic Decision (Undergraduate):
https://uwo.ca/univsec//pdf/academic_policies/appeals/undergrad_requests_for_relief_procedure.pdf

6.4 Scholastic offences

Policy on Scholastic Offences: https://uwo.ca/univsec//pdf/academic_policies/appeals/scholastic_offences.pdf

Procedures on Scholastic Offences (Undergraduate):
https://uwo.ca/univsec//pdf/academic_policies/appeals/undergrad_scholastic_offence_procedure.pdf

Use of Electronic Devices During Assessments

In courses offered by the Faculty of Science, the possession of unauthorized electronic devices during any in-person assessment (such as tests, midterms, and final examinations) is strictly prohibited. This includes, but is not limited to: mobile phones, smart watches, smart glasses, and wireless earbuds or headphones. Unless explicitly stated otherwise in advance by the instructor, the presence of any such device at your desk, on your person, or within reach during an assessment will be treated as a *scholastic offence*, even if the device is not in use.

Only devices expressly permitted by the instructor (e.g., non-programmable calculators) may be brought into the assessment room. It is your responsibility to review and comply with these expectations.

Use of Generative AI Tools

Unless otherwise stated, the use of generative AI tools (e.g., ChatGPT, Microsoft Copilot, Google Gemini, or similar platforms) is **not permitted** in the completion of any course assessments, including but not limited to: assignments, lab reports, presentations, tests, and final examinations.

Using such tools for content generation, code writing, problem solving, translation, or summarization—when not explicitly allowed—will be treated as a **scholastic offence**.

Students will receive AI-based suggestions for writing style, but not generative AI, through the Packback software package.

If the use of generative AI is permitted for a particular assessment, the conditions of use will be specified by the instructor in advance. If no such permission is granted, students must assume that use is prohibited. It is your responsibility to seek clarification before using any AI tools in academic work.

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>).

6.5 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. If you have any questions regarding accommodations, you may also wish to contact Accessible Education at

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

Learning-skills counsellors at the Student Development Centre (<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, <http://westernusc.ca/services>.