



**Western  
Science**

**Biology 2485B  
Environmental Biology**

**Winter 2024**

**1. Course Information and Prerequisites**

**Lectures:** See schedule in the syllabus posted on OWL

**Tutorials:**

Sections 002 to 008 start the week of January 22

Sections 009 to 014 start the week of January 29

See the schedule in the syllabus posted on OWL

**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 your Dean 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

### Dr. Vera Tai

e-mail: [vtai4@uwo.ca](mailto:vtai4@uwo.ca)

office hours: Thursdays 2:30 - 4:30 pm, BGS 2028, drop-in  
or e-mail to schedule another time if needed

### Teaching Assistants:

Section	TA	E-mail address
002 and 008	Emelie Obi	<a href="mailto:jobi@uwo.ca">jobi@uwo.ca</a>
003 and 009	Lauren Witterick	<a href="mailto:lwitteri@uwo.ca">lwitteri@uwo.ca</a>
004 and 010	Parker VanBelleghem	<a href="mailto:pvanbel3@uwo.ca">pvanbel3@uwo.ca</a>
005 and 011	Mika Little	<a href="mailto:mlittl49@uwo.ca">mlittl49@uwo.ca</a>
006 and 012	Tessa Fortnum	<a href="mailto:tfortnum@uwo.ca">tfortnum@uwo.ca</a>
007 and 013	Melina Kuerschner	<a href="mailto:mkuersch@uwo.ca">mkuersch@uwo.ca</a>
014	Natalie Tateishi	<a href="mailto:ntateish@uwo.ca">ntateish@uwo.ca</a>

## 3. Course Description and Schedule

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 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
January 9 & 11	Introduction. Valuing Environmental Processes	No tutorial
January 16 & 18	Human Population Growth Terrestrial Environments	No tutorial
January 23 & 25	Terrestrial Diversity Marine Environments	Tutorial Introduction (sections 002 - 007)
Jan. 30 & Feb. 1	Marine Diversity Atmospheric Processes	Tutorial Introduction (sections 008 - 014)
February 6 & 8	Atmospheric Pollution Global Climate Change Processes I	#1 Diversity (002-007)
February 13 & 15	Global Climate Change Processes II Global Climate Change Consequences I	#1 Diversity (008-014)
Week of February 19	<b>Reading Week</b>	No tutorial
February 27 & 29	Global Climate Change Consequences II Conventional Energy Resources I	#2 Climate Change (002-007)
<b>SAT. March 2</b>	<b>Midterm, 1:30 to 4 pm, location TBA</b>	
March 5 & 7	Conventional Energy Resources II Alternative Energy Resources I	#2 Climate Change (008-014)
March 12 & 14	Alternative Energy Resources II Soil Resources	#3 Energy (002-007)
March 19 & 21	Green Revolution Parasites, Invasive Species??	#3 Energy (008-014)
March 26 & 28	Forestry Mining	#4 Food, Forestry, Mining (002-007)
April 2 & 4	Freshwater Resources Course Summary	#4 Food, Forestry, Mining (008-014)
scheduled by the Registrar, April 11-30	<b>Final Exam, time and location TBA</b>	

## 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.

This text 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=W2023B&courses%5B0%5D=001\\_UW/BIO2485B](https://bookstore.uwo.ca/textbook-search?campus=UWO&term=W2023B&courses%5B0%5D=001_UW/BIO2485B)

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

Students are required to buy Packback, which 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](mailto:help@packback.co) on January 10. 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 (<http://owl.uwo.ca>)

All course material will be posted to OWL, and students are responsible for checking the course OWL 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.

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

The overall course grade will be calculated as listed below:

Course Component	Weight	Description
Reflections (5)	15%	Discussions on Packback assigned every 2 weeks that reflect on 5 main topics: Introduction, Diversity, Climate change, Energy, and Natural resources. <b>For due dates, see below.</b>
Presentation	20%	Individual presentation during scheduled tutorial times <b>Presentation schedule to be determined on the first tutorial day</b>
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 <b>Saturday March 2, 1:30 pm - 4:00 pm, location TBA</b> make-up: Wednesday March 6, 7 - 9:30 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. 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
<b>Introduction to Biology and the Environment</b>	Thursday, January 19	Monday, January 22
<b>Diversity</b>	Thursday, February 1	Monday, February 5
<b>Climate Change</b>	Friday, February 16	Wednesday, February 28
<b>Energy</b>	Thursday, March 14	Monday, March 18
<b>Natural Resources</b>	Thursday March 28	Monday, April 1

## **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 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.

## **Late Course Components**

Reflections, presentations, and associated research paper must be handed in on the appropriate due date unless a valid excuse is provided through your academic counsellor, and an alternate due date will be arranged with your instructor.

## **Information about late or missed evaluations:**

- Late course components without academic consideration will be subject to a late penalty of 10% per day.
- Missed presentations without academic consideration will be subject to a late penalty of 20%, and a missed presentation must be rescheduled as soon as possible.
- If you miss the mid-term (March 2nd, 1:30 pm), you are eligible to write the make-up (scheduled for March 6th at 7 pm) only if you have academic consideration.
- If you miss the Final Exam, please contact your faculty's Academic Counselling Office as soon as you are able to do so. They will assess your eligibility to write the Special Exam (the name given by the university to a makeup Final Exam).

## **Required Conditions to Pass the Course**

- i) completion of the Final Exam

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

Click [here](#) for a detailed and comprehensive set of policies and regulations concerning examinations and grading. The table below outlines the University-wide grade descriptors.

A+	90-100	One could scarcely expect better from a student at this level
A	80-89	Superior work which is clearly above average
B	70-79	Good work, meeting all requirements, and eminently satisfactory
C	60-69	Competent work, meeting requirements
D	50-59	Fair work, minimally acceptable
F	below 50	Fail

## 6. Student Absences

If you are unable to meet a course requirement due to illness or other serious circumstances, please follow the procedures below.

You must provide valid medical or supporting documentation to the Academic Counselling Office of your Faculty of Registration as soon as possible. For further information, please consult the University's medical illness policy at:

[https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/accommodation\\_medical.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf)

The Student Medical Certificate is available at:

[https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/medicalform.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf)

### **Absences from Presentation**

If you miss your scheduled presentation, you must contact the Academic Counselling office of your Faculty of Registration as soon as you are able to do so. If you are granted academic consideration, then you are eligible to present at another date, and **you must contact your TA to re-schedule your presentation as soon as possible**. Deadlines will be extended based on any academic consideration provided by the Academic Counselling Office.

### **Absences from Midterm**

If you miss the midterm, please contact the Academic Counselling office of your Faculty of Registration as soon as you are able to do so. If you are granted academic consideration, then you are eligible to write the make-up midterm. If you also miss the make-up midterm, then you must contact the Academic Counselling office again. If you are again granted academic consideration, the weight of the midterm will be shifted to the final exam (i.e. the final exam will be worth 65%).

### **Absences from Final Examinations**

If you miss the Final Exam, please contact the Academic Counselling office of your Faculty of Registration as soon as you are able to do so. They will assess your eligibility to write the Special Examination (the name given by the University to a makeup Final Exam).

You may also be eligible to write the Special Exam if you are in a “Multiple Exam Situation” (e.g., more than 2 exams in a 23-hour period, more than 3 exams in a 47-hour period).

## **7. Accommodation and Accessibility**

### **Religious Accommodation**

When a course requirement conflicts with a religious holiday that requires an absence from the University or prohibits certain activities, students should request accommodation for their absence in writing at least two weeks prior to the holiday to the course instructor and/or the Academic Counselling office of their Faculty of Registration. Please consult University's list of recognized religious holidays (updated annually) at:

<https://multiculturalcalendar.com/ecal/index.php?s=c-univwo>.

### **Accommodation Policies**

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

[https://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/Academic Accommodation\\_disabilities.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Accommodation_disabilities.pdf)

## **8. Academic Policies**

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

In accordance with policy, <http://www.uwo.ca/its/identity/activatenonstudent.html>, 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.

Electronic devices will not be permitted on tests and exams.



**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:

[http://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/scholastic\\_discipline\\_undergrad.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf)

Review Biology 2290 learning outcomes. You are expected to know what plagiarism is at this stage of your programme.

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>).

**Remote Proctoring, in the event of a health lock-down:**

Tests and examinations in this course will be conducted using a remote proctoring service. By taking this course, you are consenting to the use of this software and acknowledge that you will be required to provide **personal information** (including some biometric data) and the session will be **recorded**. Completion of this course will require you to have a reliable internet connection and a device that meets the technical requirements for this service.

More information about this remote proctoring service, including technical requirements, is available on Western's Remote Proctoring website at: <https://remoteproctoring.uwo.ca>.

**Professionalism & Privacy:**

Western students are expected to follow the [Student Code of Conduct](#). Additionally, the following expectations and professional conduct apply to this course:

- Students are expected to follow online etiquette expectations provided on OWL
- All course materials created by the instructor(s) are copyrighted and cannot be sold/shared
- Recordings are not permitted (audio or video) without explicit permission
- Permitted recordings are not to be distributed
- Students will be expected to take an academic integrity pledge before some assessments
- All recorded sessions will remain within the course site or unlisted if streamed

## 9. Support Services

Please visit the Science & Basic Medical Sciences Academic Counselling webpage (<https://www.uwo.ca/sci/counselling/>) or the School of Health Studies Academic Counselling webpage ([https://www.uwo.ca/fhs/shs/academic\\_counselling/index.html](https://www.uwo.ca/fhs/shs/academic_counselling/index.html)) for information on add/drop courses, academic considerations for absences, appeals, exam conflicts, and many other academic related matters.

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](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](mailto: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](http://academicsupport.uwo.ca/accessible_education/index.html)

if you have any questions regarding accommodations.

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.

Western University is committed to a thriving campus as we deliver our courses in the mixed model of both virtual and face-to-face formats. We encourage you to check out the Digital Student Experience website to manage your academics and well-being: <https://www.uwo.ca/se/digital/>

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

## 10. Equity, Diversity, Inclusion and Decolonization (EDID)

**Land Acknowledgement:** We acknowledge that Western University is located on the traditional lands of the Anishinaabek, Haudenosaunee, Lūnaapéewak, and Chonnonton Nations, on lands connected with the London Township and Sombra Treaties of 1796 and the Dish with One Spoon Covenant Wampum. This land continues to be home to diverse Indigenous peoples (First Nations, Métis and Inuit) whom we recognize as contemporary stewards of the land and vital contributors of our society. Throughout Canada, North America, and the world, Indigenous Peoples are vital contributors to their communities, and we greatly value their presence, knowledge, and wisdom.