

## ENVIRSCI 2300F: Foundations in Environmental Science



"Ophelia" by Sir John Everett Millais (1951-1852) modified by Quentin Devine (2022)

### 1. Course Information

**Description:** A foundational course exposing students to the interdisciplinary fields of environmental science by identifying how current environmental issues (e.g., resource extraction, climate change, etc.) are addressed by different disciplines. Sustainability metrics will also be explored. Students will work through insightful case studies and assess scientific literature from different stakeholder perspectives.

**Lecture:** Tuesday 9:30–10:30 am, Thursday, 09:30–11:30 am

**Prerequisites:** Environmental Science 1021F/G, or any 0.5 Earth Sciences course at the 1000 level, or registration in any module within the Faculty of Science or Schulich School of Medicine and Dentistry, or permission of the Department.

**Notice:** Unless you have either the prerequisites for this course or written special permission from the Department of Earth Sciences to enroll in it, you may be removed and withdrawn from this course in accordance with university policy. This may be done after the add/drop deadline of the academic term, and the course will be marked as withdrawn (WDN) on your academic record.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

Instructors	Email	Office	Phone	Office Hours
Dr. Jeremiah (Jer) Shuster	jshuste3@uwo.ca	BGS 0164	NA	(see below)

Please use your Western (@uwo.ca) email addresses when emailing me. I have an open-door policy. You are welcome to stop by my office or make an (in-person or online) appointment to guarantee a time. Please feel free to ask questions, voice concerns, or discuss any suggestions.

### 3. Course Syllabus, Schedule, Delivery Mode

Course Topics and Approximate Timeline of Course Topics		
Date	Format	Topics and Themes
<b>Week 1 Theme: Welcome to 2300F</b>		
Sept 4	Lecture	Introduction and expectations
<b>Week 2 Theme: Environmental quality and current problems</b>		
Sept 9	Lecture	What are the foundations?
Sept 11	Activity	What environmental spheres interest you?
<b>Week 3 Theme: Careers related to the environment</b>		
Sept 16	Lecture	Who are we?
Sept 18	Activity	Where do you want to go?
<b>Week 4 Theme: The environment from an Indigenous perspective</b>		
Sept 23	Lecture	Guest Lecturer: Victoria Bomberry
Sept 25	Activity	Case Study
<b>Week 5 Theme: The biosphere</b>		
Sept 30	No Lecture	National Day for Truth and Reconciliation
Oct 2	Lecture	Biodiversity
<b>Week 6 Theme: The geosphere</b>		
Oct 7	Lecture	Guest Lecturer: Elizabeth Webb
Oct 9	Activity	Guest Lecturer: Elizabeth Webb
<b>Week 7 Theme: The hydrosphere</b>		
Oct 14	Lecture	Guest Lecturer: Sabina Rakhimbekova
Oct 16	Activity	Case Study
<b>Week 8 Theme: The environment from a geomicrobiology perspective</b>		
Oct 21	Lecture	How do microbes impact the environment?
Oct 23	Midterm	In-class midterm (material up to October 16)
<b>Week 9 Theme: The environment from a geomicrobiology perspective</b>		
Oct 28	Lecture	How can microbe promote sustainability?
Oct 30	TBD	TBD
<b>Week 10 Theme: Reading week</b>		
Nov 4	No Lecture	
Nov 6	No Lecture	
<b>Week 11 Theme: The environment from a business perspective</b>		
Nov 11	Lecture	Can conventional waste be made into a resource?
Nov 13	Lecture	Guest Lecturer: Julien Denis
<b>Week 12 Theme: The environment from a legal perspective</b>		
Nov 18	Lecture	Guest Lecturer: Paula Lombardi
Nov 20	Activity	Case Study
<b>Week 13 Theme: The environment from an education perspective</b>		
Nov 25	Lecture	Guest Lecturer: Kristen Zinger
Nov 27	Activity	Case Study
<b>Week 14 Theme: Improving environmental science literacy</b>		
Dec 2	Lecture	Group work presentations
Dec 4	Lecture	Group work presentations
<b>Week 15 Theme: Last week of classes at Western</b>		
Dec 9	No Lecture	

## Learning Outcomes:

On successful completion of this course, you will be able to:

- Conduct a literature review using academic databases
- Critically evaluate sources for credibility and relevance
- Write clear, concise, and thoughtful reflections on topics related to the environment
- Present scientific findings and communicate concepts to non-experts
- Work effectively in collaborative and interdisciplinary groups
- Actively listen to specialists outside of your discipline

## Key Sessional Dates for 2025:

Classes begin: September 4

Fall Reading Week: November 3 – 9

Classes end: December 9

Exam period: December 11 – 22

## 4. Course Materials

There are **no** textbooks required for this course. A portion of your tuition fees contributes to Western's subscriptions to academic journals. You literally have access to a wealth of information that most of the population does not have. All course material will be posted to OWL: <https://westernu.brightspace.com/>. I strongly encourage everyone to make use of the library resources while you still have access to them.

This class will use Mentimeter or Kahoot. Either one of these apps can be accessed through your electronic device (e.g., smart phone, iPad, tablet, laptop).

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 with the course OWL site, 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.

## 5. Methods of Evaluation

### Grading Scheme and Assessment Dates

The overall course grade will be calculated as listed below:

Assignments (7)	49%
Group Work (1)	30%
Attendance (6)	1%
Midterm Test (1)	10%
Final Exam (1)	10% (Cumulative)

**Assignments:** The assignments will involve guided reflective writing about material presented in class and the assigned readings. All assignments will be delivered, completed, and handed within the

designated time (i.e., see “Activity” listed in the above Timeline). The purpose of having in-class assignments has multiple benefits (i.e., equal in work ethic, promotes academic integrity, builds time management skills, reduces homework load and stress). If you know that you cannot attend class to complete an assignment, you must notify me by noon on Wednesday before class to discuss a reasonable alternative option. If an emergency arises, contact academic consideration.

**Group Work:** You will be put into interdisciplinary groups to collaboratively work on a group project. More information about the project and how its assessment will be provided in class after the Add/Drop date (12 September 2025).

**Attendance:** Attendance will be taken on the days we will have guest lecturers (i.e., September 23, October 7, 9, 14, and November 13, 18, 25). These guests have willingly offered to share their knowledge with us. I strongly recommend putting these dates in your calendar at the beginning of semester.

**Midterm Test:** The midterm will be held in class on October 23<sup>rd</sup> and will cover material from September 4 to October 16.

**Final Exam:** The final exam will be cumulative, and the date will be determined by the Office of the Registrar closer to the end of semester.

### **Use of Generative AI Tools**

Generative AI tools (e.g., ChatGPT, Copilot, Gemini) are **prohibited** for assignments that will be completed within class hours. On the contrary, generative AI tools are **permitted with limitations** for Group Work. Specifically, conditional use of AI may be used for brainstorming. It may not be used for writing.

### **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](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/](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:

- Examinations scheduled during official examination periods (Defined by policy)
- Assignments (Defined by policy)
- Midterm/Group Project (Designated by the instructor as the one assessment that always requires documentation when requesting Academic Consideration)

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

**Assignments:** If you know that you cannot attend class to complete an assignment, you must notify me by noon on Wednesday before class to discuss a reasonable alternative option. If an emergency arises (i.e., between Wednesday and Thursday at noon), contact academic consideration. If no alternative arrangement is made, a mark of zero will be given.

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.

## 6. Additional Statements

### 6.1 Religious Accommodation

When conflicts arise 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 of 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>

### 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](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Accommodation_disabilities.pdf).

### 6.3 General Academic Policies

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

**Use of @uwo.ca email:** In accordance with policy, [https://www.uwo.ca/univsec/pdf/policies\\_procedures/section1/mapp113.pdf](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 email address. It is the responsibility of the account holder to ensure that emails received from the University at their official university address are 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](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](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](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](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, presentations, midterms, 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**.

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>).

Computer-marked multiple-choice tests and exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.



## 6.5 Support Services

Please visit the Science & Basic Medical Sciences Academic Advising webpage for information on adding/dropping courses, academic considerations for absences, requests for relief, 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](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. If you have any questions regarding accommodations, 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)

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.

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, <https://westernusc.ca/services/>.