

## Integrated Science 2001F: Sustainability and the Environment

### 1. Course Information

IntegSci 2001F: Sustainability and the Environment, Fall 2021

Class hours: Thursday, 6:30-9:30pm, in PAB-106

Tutorial hours: Thursday, 1:30-2:30pm, in PAB-106

Office hours: Thursday, 2:30-3:30pm in hallway, or virtual by appointment

#### List of Prerequisites

None

#### List of Antirequisites

Environmental Science 1021F

### 2. Instructor Information

Instructors	Email	Office	Office Hours
Kristen Zinger (she/her)	kzinger2@uwo.ca	Virtual	Thursday, 2:30-3:30 - Additional time available by request

Students must use their Western (@uwo.ca) email addresses when contacting their instructors. Include the course name or number in the subject line of your email so that it is clear what course you are asking about.

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

An exploration of socio-scientific issues facing humanity, including climate change, world hunger, energy/water availability and habitat loss. The interdisciplinary nature and interconnectivity of these issues will be discussed. Students will access the scientific literature and government reports, critically evaluate the data presented and use it to develop cogent arguments.

#### Learning outcomes

Classroom and tutorial sessions are intended to help students develop skills in:

1. Demonstrate understanding of how the environment intersects with students respective specializations
2. Critically evaluating how science and society interacts with the environment
3. Summarizing ideas in environment and sustainability, in a way that is suitable for a scientific as well as a general audience
4. Writing a formal paper with critical analysis of a chosen perspective
5. Sharing ideas with peers in a moderated discussion setting
6. Provide and incorporate feedback on your written work in a collaborative setting
7. Communicate scientific ideas with other scientists from outside their area of specialty
8. Form an opinion on an academic work based on weeks of exploring the topics shared within the piece from different perspectives

Furthermore, by the end of the course, students will be expected to be able to discuss and answer questions based on:

1. The value provided by the environment
2. The growth of natural, including human, populations and why population growth leads to environmental challenges
3. The types of terrestrial and marine environments seen on earth, and explain what the threats to these environments are
4. The structure and composition of the atmosphere, and explain why pollution presents a challenge to a normally-functioning atmosphere
5. The causes and consequences of climate change, and know the policy approaches taken to address climate change
6. The consequences, both positive and negative, of various energy sources
7. The composition of soils and how advances in agricultural practices have led to an increased ability to feed a growing population
8. The value of forest, mining, and freshwater resources, and the threats presented to the sustainability of these resources

During each lecture, we will have a planned topic and list of discussion points. After each lecture, the content will be posted but class discussions will not be included. It will be the students job to record important discussion points from class.

### **Lecture schedule**

The lecture topics presented below are *tentative* and may change as the semester develops. Required (testable) readings are indicated in bold text.

	<b>Tutorial</b>	<b>Lecture</b>
<b>Week 1</b> Jan 12	No Tutorial	Course introduction + Environment and sustainability explained
<b>Week 2</b> Jan 19	Introduction + Environmental thought	Humans & the environment, sources of pollution and degradation
<b>Week 3</b> Jan 26	First discussions of Silent Spring	Water systems, pollutions, and resources
<b>Week 4</b> Feb 2	Silent Spring discussion	Land systems, pollutions, and resources - exploration of ecosystems
<b>Week 5</b> Feb 9	Silent Spring discussion	Biodiversity
<b>Week 6</b> Feb 16	iNaturalist time	Soil, agriculture, and food resources
<b>Week 7</b> Feb 23	No tutorial - Reading Week	<i>No Lecture - Reading Week</i>

<b>Week 8</b> Mar 2	Group study + question period	Midterm + healthy cities
<b>Week 9</b> Mar 9	Silent Spring discussion	Conventional energy resources + renewable energy
<b>Week 10</b> Mar 16	Soundscape work	Climate change and global warming
<b>Week 11</b> Mar 23	Soundscape mapping	Anthropocene
<b>Week 12</b> Mar 30	Final paper work period + questions + peer review suggested	Solving climate change - technology and society
<b>Week 13</b> Apr 6	Exam group study & questions	<i>Examination period begins</i>

### **Contingency plan for an in-person class pivoting to 100% online learning**

In the event of a COVID-19 resurgence during the course that necessitates the course delivery moving away from face-to-face interaction, all remaining course content will be delivered entirely online, either synchronously (i.e., at the times indicated in the timetable) or asynchronously (e.g., posted on OWL for students to view at their convenience). The delivery mode will be decided based on the circumstances, but my preference is to deliver the material synchronously. The grading scheme will **not** change. Any remaining assessments will also be conducted online as determined by the course instructor.

## **4. Course Materials**

There is no assigned textbook for this course. As part of the class, we will be reading *Silent Spring* by Rachel Carson. The book will lead many of the discussions we have in groups and as a class. This book is mandatory.

Students are responsible for checking the course OWL site (<http://owl.uwo.ca>) 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 OWL: <http://owl.uwo.ca>. Lecture content will be posted after each lecture and I recommend referring to this when studying for course assessments.

If students need assistance with the course OWL site, 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.

## 5. Methods of Evaluation

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Participation	Lecture & Tutorial participation & iNaturalist participation	20%
Journal entries	#1 - #2- #3-	5% each
Midterm	In class	15%
Soundscape	due date	10%
Final paper	due date	15%
Final Exam	during exam period	25%

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### Participation

Students participation mark will be calculated based on lecture and tutorial participation, as well as their participation in the biodiversity assignment. This assignment will be introduced in week 5 during the biodiversity lecture and students will have until the end of the course to fulfill the requirements.

The biodiversity assignment is meant to engage students with their local environment. It will not be graded as an assignment.

### Journal Entries

Journal entries will be used to connect the novel, *Silent Spring*, to course material. Students will have the opportunity to discuss topics with peers during tutorial time. It is suggested that notes are taken during these discussions to help form journal entries. There will be 3 journal entries to be submitted throughout the course and they will be posted 1 week prior to their due date. Journal entries will be 500 words in length.

### Soundscape

The annotated bibliography is to help you get on the right track with your final research project. You will submit this assignment using the Assignments section on OWL – no paper copy is required. In an annotated bibliography, you are expected to give a short outline of your final paper, and include at least five references, of which a minimum of two should be primary articles (the difference between primary and secondary articles will be described in class) and at least one should be a secondary source. With each of your references, you should give at least one piece of information that clearly shows how the article contributes to the point you are trying to make in your final paper. An example will be provided on the course website.

The annotated bibliography will be 1-2 pages long. There are not marks for format, but there are for content, spelling and grammar. Try to follow the referencing format from the Journal of Environmental Sciences. *The annotated bibliography is worth 5% of your final mark.*

### **Final Paper**

The final paper will be between 1500-2000 words long and written about the course novel, Silent Spring. Students will be presented with 3 perspectives to choose from and will craft a formal response to a guiding question based on that response. References should be made to the novel and lecture material. Students may choose to use outside sources but the purpose of the paper is to be resemble more of a critical reflection than a research based paper.

### **Midterm and exam**

There is one in-class midterm and a cumulative final exam in this course; all exams are compulsory. Students are responsible for material presented/discussed in lecture and tutorial, including the group presentations and the assigned readings. You can expect the exams to include multiple choice and short answer questions.

If you require a rescheduled midterm or final exam, please contact me immediately to make arrangements. The midterm can be scheduled at a different time during tutorial or before class. The final exam will need to be rescheduled according to the registrars guidelines. The earlier we find a new date/time for examinations the better so please do not leave this to the last minute.

### **Course expectations**

- All assignments should be submitted by the time mentioned in the schedule shown above
- Written assignments will be submitted electronically to Turnitin (statement in policies below)
- Extensions will be granted if needed, please contact me as soon as you are aware you need one
- Rubrics will be used to evaluate assessments and will be made available to students through the course page

### **Late assignments**

Assignments submitted after the advertised due date and time will be penalized 10% per day unless you have spoken with me about an extension. Any assignments submitted more than two weeks late without an extension or after the final exam will receive a mark of 0. **For this reason, make sure that you have backed up your assignments in the cloud or on an external storage device.**

## **6. Student Absences**

### **Academic Consideration for Student Absences**

Students who experience an extenuating circumstance (illness, injury or other extenuating circumstance) sufficiently significant to temporarily render them unable to meet academic requirements may submit a request for academic consideration through the following routes (**NOT through their course instructors**):

- (i) Submitting a Self-Reported Absence (SRA) form provided that the conditions for submission are met. To be eligible for a Self-Reported Absence:
  - an absence must be no more than 48 hours
  - the assessments must be worth no more than 30% of the student's final grade
  - no more than two SRAs may be submitted during the Fall/Winter term
- (ii) For medical absences, submitting a Student Medical Certificate (SMC) signed by a licensed medical or mental health practitioner to the Academic Counselling office of their Faculty of Registration.
- (iii) Submitting appropriate documentation for non-medical absences to the Academic Counselling office in their Faculty of Registration.

Note that in all cases, students are required to contact their instructors within 24 hours of the end of the period covered.

Students should also note that individual instructors are not permitted to receive documentation directly from a student, whether in support of an application for consideration on medical grounds, or for other reasons. **All documentation required for absences that are not covered by the Self-Reported Absence Policy must be submitted to the Academic Counselling office of a student's Home Faculty.**

For the policy on Academic Consideration for Student Absences – Undergraduate Students in First Entry Programs, see:

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

and for the Student Medical Certificate (SMC), see:

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

### **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>

### **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 23-hour period, more than 3 exams in a 47-hour period).

If a student fails to write a scheduled Special Examination, the date of the next Special Examination (if granted) normally will be the scheduled date for the final exam the next time this course is offered. The maximum course load for that term will be reduced by the credit of the course(s) for which the final examination has been deferred. See the Academic Calendar for details (under [Special Examinations](#)).

## 7. Land acknowledgment

We acknowledge that Western University is located on the traditional lands of the Anishinaabek, Haudenosaunee, Lūnaapéewak and Attawandaron peoples, 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 (e.g. First Nations, Métis and Inuit) whom we recognize as contemporary stewards of the land and vital contributors of our society.

## 8. Accommodation and Accessibility

### Accommodation Policies

Students with disabilities work with Accessible Education (formerly SSD), 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)

## 9. Academic Policies

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

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 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.

Non-programmable calculators are permitted for the midterm and final exam.

**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)

The work you submit must be your own. Although it is normal to work with a partner on assignments, you must put your submission in your own words. If you have any questions about what constitutes plagiarism, consult the above website or discuss with your instructor before submitting any work to be graded. Remember to cite the ideas of others if you are using their published work in your assignments.

Turnitin ***aids*** in identifying plagiarism. 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.

## 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 interact with their instructor and fellow students with courtesy and respect. The instructor will first issue a warning if he observes any behaviour that is or might be considered offensive. Subsequent infractions will result in a grade penalty. The warning will mention the extent of the penalty for a similar infraction.
- 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 without explicit permission
- 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

## 10. Support Services

Please visit the Science & Basic Medical Sciences Academic Counselling 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/>

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 (519) 661-2147 if you have any questions regarding accommodations.

Learning-skills counsellors at the Student Development Centre (<http://www.sdc.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.

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

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