

Course Outline Winter 2025

General Information

Course Code: ENVS 3240

Course Title: Creative Writing for Environmental Science

Course Description:

Science is inherently a creative endeavour, a fact that is often lost in translation. In our modern day, scientists are increasingly being called upon to communicate their ideas and findings to new audiences. In this innovative interdisciplinary course, we will examine texts of creative writing for the environmental science presented within, following up with reading scientific articles related to the subject matter. We will examine the role that creative writing (poetry, storytelling, essays and more) can play in creating inspiration, interest, and even rigour in scientific thinking and communication. Ultimately, the student will be able to interpret and appraise the creative process as it unfolds a scientific discovery, differentiate and apply techniques of creative writing, and interpret and discuss the fundamentals of an environmental science topic.

Credit Weight: 0.50

Academic Department (or campus): School of Environmental Sciences

Campus: Guelph

Semester Offering: Winter

Class Schedule and Location: 1:30pm – 4:20pm EST
Virtual

Topic: ENVS 3240 2025
Time: 01:30 PM Eastern Time (US and Canada)
Every week on Wed

Join Zoom Meeting
<https://zoom.us/j/91852946532?pwd=t4qohfaqtAiGsTGa7yaU8bBaA4GXA1.1>

Meeting ID: 918 5294 6532
Passcode: 714034

Instructor Information

Instructor Name: Madhur Anand

Instructor Email: manand@uoguelph.ca

Office location and office hours: online (hours by appointment)

Course Content

Specific Learning Outcomes (critical thinking, literacy, communication, global understanding).
The student will be able to:

1. Interpret and criticize creative writing from across the globe and interrogate creative writing pieces for scientific content (University Learning Outcome 1,2)
2. Describe, interpret, and discuss at least one sub-discipline of environmental science through the lens of creative writing and primary scientific articles (University Learning Outcome 2,3)
3. Examine and assess the value of creative processes in scientific discovery and communication (University Learning Outcome 4)
4. Demonstrate the effective communication of novel ideas orally and in writing (University Learning Outcome 4)
5. Adopt new and improve existing communication and writing skills across the broad spectrum of environmental science (University Learning Outcome 4)
6. Integrate the arts (A), into traditional STEM (Science, Technology, Engineering, and Math) training (University Learning Outcome 3)

Lecture Content

There are no formal lectures. We will meet once a week to discuss readings, presentations, writing and/or topics led by the instructor, and occasionally by peers or guests. Class time will also be necessary to incorporate short real-time writing exercises led by the instructor and one-on-one instructor-student feedback. The instructor will provide assigned readings, if required, in advance of the meetings. Guest visits (subject to availability of speakers) by creative writers and/or environmental scientists may allow students first-hand interrogation during writing exercises.

Course Schedule:

Week 1 – January 8th (Course Learning Outcomes 1, 3, 5)

In Class:

- a) Icebreaker and introduction to course topics & reading materials, instructor-led;
What is creative writing? What are the genres used in creative scientific writing?

b) Read together (or in breakout groups) a creative nonfiction short piece (e.g., from Holly Hogan and/or works by E.C. Pielou and/or Robin Wall Kimmerer) and discuss the role and power of creative writing for environmental science.

Class-source interests for readings and topics to cover in the course.

Writing Exercise: In class writing prompt/exercise

Discussion of Assignment 1 for the course: "My Silent Spring."

To Get: Hardbound writing notebook (class participation and reflections mark)

Homework:

1. *Reading assignment: Chapters 1-8 of Silent Spring.*
2. *Subject and sources due for Assignment 1: "My Silent Spring"*

Week 2 – January 15th (Course Learning Outcomes 1, 6)

Due this week: Subject and sources due for Assignment 1: "My Silent Spring" (in class)

In Class:

Q&A time for Assignment 1

Expert's opinion: Guest Writer; Q&A

Writing Exercise: In class writing prompt/exercise

Homework:

1. *Next Reading Assignment: Chapters 9-17 of Silent Spring.*

Week 3 – January 22nd (Course Learning Outcomes 1, 2, 4, 5)

In Class:

Expert's opinion:

1. **Hannah Hoag** on journalism and creativity
2. **Bridget Stutchbury** on science and creative writing

Discussion of lectures - questions and points on the similarities and differences between scientific writing and creative writing. What are the similarities and differences between scientific writing and creative writing?

Writing exercise: In class writing prompt/exercise

Homework (Assignment 2):

1. *Reading assignment: selections from “A New Index for Predicting Catastrophes”;*
object poem examples
2. *Bring an “object” to next class.*

Week 4 – January 29th (Course Learning Outcomes 1, 4, 5, 6)

Due this week: Assignment 1 (due Jan 28th)

In Class:

Expert’s opinion:

1. **Rhiannon Ng** on poetry and science

Discussion on the role of defamiliarization in creative writing.

Writing exercise: Object poem. Discussion on the role of revision and in particular how to balance knowledge and discovery in writing.

Homework:

1. *Revision of Object Poem by discovering new environmental scientific knowledge about your object.*

Week 5 – February 5th (Course Learning Outcomes 1, 2, 6)

Due this week: Assignment 2 (due Feb 4th)

In Class:

Instructor-led readings of science-inspired poetry. What science is being communicated? How can it be done effectively in poems vs. scientific papers?

Writing exercise: Found poetry from a scientific article. Wolf Lake paper in class

Preparation for Assignment 3: Be a curator: gather together a diverse set of readings from reputable sources (1 poem, 1 creative non-fiction, and 1 short story) on an environmental science object/subject of your choice (pick something simple like “trees” or “birds” or “rocks” or “climate change” to share with the class next class as an oral presentation. We can use class time for this, and instructor will suggest sources.

Homework:

1. *Start to think about ideas for your independent project. Bring ideas and reading list to next class.*
2. *Read excerpts of work from next week’s Guest Writer (to be provided).*

Week 6 – February 12th (Course Learning Outcomes 1, 2, 5, 6)

Due this week: Assignment 3 (due in class)

In Class:

Presentations

Homework:

1. *Work on independent project reading lists and proposal/outline.*

Week 7 – February 19th: Reading Week (no class) –

Week 8 – February 26th (Course Learning Outcomes 3, 4, 5)

Due this week: Assignment 4 (due Feb 25th)

In Class:

Expert's opinion:

1. **Dr. Stephen Heard**
2. **Dr. Jacqueline Padilla-Gamino**

Discussion of lectures.

Writing exercise: critique/questioning and response
Discussion of independent project with each student.

Homework:

1. *Read excerpts of work by next week's Guest Writer (to be provided).*

Week 9 – March 5th (Course Learning Outcomes 1, 2, 5, 6)

In Class:

Expert's opinion:

1. **Jan Conn**

Discussion of lectures.

Writing exercise: In class writing prompt

Homework:

1. *Draft of final project (due March 11th)*

Week 10 – March 12th (Course Learning Outcomes 1, 2, 5, 6)

Due this week: Draft of final project (due March 11th)

Drop-in period (3:00pm –4:00pm) for a writing clinic via Zoom.

Week 11 – March 19th (Course Learning Outcomes 4, 6)

One-on-one consultations with course instructor for draft independent project proposal/progress. Students will schedule their one-on-one during class hours, and must bring an outline and list of references for this consultation.

Week 12 – March 26th (Course Learning Outcomes 3, 4, 5)

Continuation of/additional one-on-one consultations with instructor for draft independent project proposal/progress (bring an outline and list of references for this consultation)

In Class:

- a) Instructor-led brainstorming session on venues for publishing or presenting creative scientific writing (reading assignment). Where to submit this kind of writing?
- b) Choose a venue and prepare your work to submit/present there (e.g., the Ontario, blogs, Departmental websites, literary journal, spoken word open mic. etc.);

Week 13- April 2 (Course Learning Outcomes 3, 4, 5)

In Class:

Expert's opinion: Guest Writer; Q&A

Writing exercise: In class writing prompt

Participation mark: mini-symposium: in-class reading of classwork

Course Assignments:

Students will be able to choose independent projects in sub-fields of environmental science of interest to them (e.g., ecology, soil science, forestry, atmospheric science, pollution, climate change science, microbiology etc.) and develop tailored reading lists around them in consultation with the instructor. The “draft stage” will be detailed annotated outline of the project and proposed reading list which will be evaluated. The “final” project will include all the revisions and feedback given by the instructor on the draft project turned in (including additional readings to be explored/assigned).

Assignments are due the day before class (by 11:59pm).

Assignment or Test	Due Date	Contribution to Final Mark (%)	Course Learning Outcomes Assessed	University Learning Outcomes Assessed
Class participation/preparedness/notebook/in class writing prompts	Course-long	15%	1-6	1-4
Assignment 1: My Silent Spring CNF	Jan 28 th (11:59pm)	15%	1-6	1-4
Assignment 2: Object Poem	Feb 4 th (11:59pm)	10%	1-6	1-4
Assignment 3: Oral Presentation	Feb 11 th (11:59pm)	10%	1-6	1-4
Assignment 4: Found Poem	Feb 25 th (11:59pm)	10%	1-6	1-4
Independent project (draft)	March 11 th (11:59pm)	15%	1-6	1-4
Independent project (final)	April 9 th (11:59pm)	25%	1-6	1-4

Course Resources

Required Texts:

1. Silent Spring by Rachel Carson (1962).
2. Various additional assigned poems, prose, essays, and scientific articles that help illuminate environmental science facts, concepts, and creative communication approaches may be used. Only those available online in full format freely will be used (many currently accessible magazines (e.g., The New Yorker, The Walrus), literary journals (e.g., The New Quarterly, the Puritan) and scientific journals (e.g., Nature, Science, Bioscience) will be used.

Sample Texts for Poetry:

Anand, Madhur. A New Index for Predicting Catastrophes, McClelland & Stewart, 2015

Larson, K. Radial Symmetry. Yale University Press, 2010.

Stephanie R Januchowski-Hartley, Natalie Sopinka, Bethann G Merkle, Christina Lux, Anna Zivian, Patrick Goff, Samantha Oester; Poetry as a Creative Practice to Enhance Engagement and Learning in Conservation Science, BioScience, Volume 68, Issue 11, 1 November 2018, Pages 905–911, <https://doi.org/10.1093/biosci/biy105>

Sample Texts from Blogs:

<https://blogs.scientificamerican.com/guest-blog/from-stem-to-steam-science-and-the-arts-go-hand-in-hand/>

<http://www.theguardian.com/books/booksblog/2014/nov/06/scientists-outshine-arts-students-with-experiments-in-creative-writing>

<https://www.livewritethrive.com/2015/12/21/31-stylistic-devices-for-creative-writers/>

Recommended Texts:

-Specialized reading lists/books for student independent projects in sub-disciplines of their choice (e.g., ecology, soil science, forestry, atmospheric science, pollution, climate change science, microbiology etc.), but only from those already available in the University of Guelph library.

Course Policies

Grading Policies:

Policy on Late Assignments:

Failure to submit assignments on or before the due dates will incur a late penalty of 10% of the total marks per day (or part thereof).

Course Policy on Group Work:

Group work is only allowed when it is explicitly assigned as group work by the instructor. All other work must be done independently.

Course Policy regarding use of electronic devices and recording of lectures:

Electronic recording of classes is expressly forbidden without consent of the instructor. When recordings are permitted they are solely for the use of the authorized student and may not be reproduced, or transmitted to others, without the express written consent of the instructor.

University Policies

Academic Consideration:

The University of Guelph is committed to supporting students in their learning experiences and responding to their individual needs and is aware that a variety of situations or events beyond the student's control may affect academic performance. Support is provided to accommodate academic needs in the face of personal difficulties or unforeseen events in the form of Academic Consideration.

Information on regulations and procedures for Academic Consideration, Appeals and Petitions, including categories, grounds, timelines and appeals can be found in [Section VIII \(Undergraduate Degree Regulations and Procedures\) of the Undergraduate Calendar](#).

Academic Misconduct:

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community, faculty, staff, and

students to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring.

University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection. Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

Detailed information regarding the Academic Misconduct policy is available in [Section VIII \(Undergraduate Degree Regulations and Procedures\) of the Undergraduate Calendar](#).

Accessibility:

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact the Student Accessibility Services (SAS), formerly Centre for Students with Disabilities (CSD), as soon as possible.

For more information, contact SAS at 519-824-4120 ext. 56208 or email sas@uoguelph.ca or visit the [Student Accessibility Services website \(http://www.uoguelph.ca/csd/\)](http://www.uoguelph.ca/csd/).

Course Evaluation Information:

End of semester course and instructor evaluations provide students the opportunity to have their comments and opinions used as an important component in the Faculty Tenure and Promotion process, and as valuable feedback to help instructors enhance the quality of their teaching effectiveness and course delivery.

While many course evaluations are conducted in class others are now conducted online. Please refer to the [Course and Instructor Evaluation Website](#) for more information.

Drop period:

The drop period for single semester courses starts at the beginning of the add period and extends to the Fortieth (40th) class day of the current semester (the last date to drop a single semester courses without academic penalty) which is listed in [Section III \(Schedule of Dates\) of the Undergraduate Calendar](#).

The drop period for two semester courses starts at the beginning of the add period in the first semester and extends to the last day of the add period in the second semester.

Information about Dropping Courses can be found in [Section VIII \(Undergraduate Degree Regulations and Procedures\) of the Undergraduate Calendar](#).