



ENVS*3040 - Natural Chemicals in the Environment

Fall 2026 Course Outline

Section: DE

Credits: 0.50

Land Acknowledgement: Guelph

The University of Guelph resides on the ancestral lands of the Attawandaron people and the treaty lands and territory of the Mississaugas of the Credit. We recognize the significance of the Dish with One Spoon Covenant to this land and offer respect to our Anishinaabe, Haudenosaunee and Métis neighbours. Today, this gathering place is home to many First Nations, Inuit, and Métis peoples and acknowledging them reminds us of our important connection to this land where we work and learn.

Calendar Description

This course explores the roles of naturally occurring chemicals in the inter-relationships of organisms, and the historical and current uses of natural chemicals by humans for agricultural and medicinal purposes.

Prerequisite(s): BIOL*1040 or (2 of BIOL*1050, BIOL*1070, BIOL*1080, BIOL*1090)

Department(s): School of Environmental Sciences

Instructor Information

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Primary instructor

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Method of Delivery

This course is a fully interactive online course and requires disciplined time management. To successfully complete this course, it is essential that you begin work as of the first week of the course and participate regularly throughout the semester. You will be required to access the course website frequently (at least three times per week). Your ability to participate online regularly is critical to your success in this course.

Course Learning Outcomes

1. Recognize and explain the ecological roles of natural chemicals.
2. Describe and assess the application of natural chemicals in agriculture and medicine.
3. Explain the pharmacological basis of the effects of certain natural chemicals.
4. Analyze and debate issues concerning the use of natural chemicals.
5. Construct arguments relating natural chemicals to conservation issues.

Learning Resources

Required Textbook



There is no required textbook for this course.

Course Website

CourseLink (<https://courselink.uoguelph.ca/>) (powered by D2L's Brightspace) is the course website and will act as your classroom. It is recommended that you log in to your course website every day to check for announcements, access course materials, and review the weekly schedule and assignment requirements.

Campus Resources

If you are concerned about any aspect of your academic program: Make an appointment with an Academic Advisor (<https://www.uoguelph.ca/registrar/enrolment-records/academic-advisors/>) in your degree program. If you are struggling to succeed academically: There are numerous academic resources offered by the Learning Commons (<https://www.lib.uoguelph.ca/using-library/spaces/learning-commons>) including, Supported Learning Groups for a variety of courses, workshops related to time management, taking multiple choice exams, and general study skills.

Cost of Textbooks and Learning Resources

Textbook / Learning Resource	Required / Recommended	Cost
N/A	N/A	No cost

Students are advised that prices are often determined by the publisher or bookstore and may be subject to change.

Library Course Reserve (Ares)

For this course, you will be required to access course reserve materials through the University of Guelph McLaughlin Library. To access these items, select **Ares** on the navbar in CourseLink. Note that you will need your Central Login ID and password in order to access items on reserve.

For further instructions on accessing reserve resources, visit How to Get Course Reserve Materials (<https://www.lib.uoguelph.ca/find/course-reserves-ares/>).

If at any point during the course you have difficulty accessing reserve materials, please contact the e-Learning Operations and Reserve Services staff at:

Tel: 519-824-4120 ext. 53621 | Email: libres2@uoguelph.ca | Location: McLaughlin Library, First Floor, University of Guelph

Teaching and Learning Activities

Method of Learning

This is a distance education (DE) course, which means all of your learning materials are available online rather than through formal lectures. You'll have the flexibility to work at your own pace each week, but it's important to keep up with the **Schedule** in this outline. Review it early, note all due dates, and add them to your calendar. Expect to spend about 10–12 hours per week on the course, as recommended by the University of Guelph for a 0.5 credit course.

Each week you'll read the unit materials and required readings, then reflect on the key themes, concepts, and arguments. Try to connect these ideas not only to the examples provided but also to ones you discover yourself. This course emphasizes active, critical thinking rather than memorization, and your engagement with the material will make the difference. Be sure to check the **Announcements** section of the course site regularly for updates and reminders.

Course Structure

There are four units in this course, each with additional sections. Each unit begins with an overview before the section content and concludes with a summary and checklist.

- Unit 01: Chemicals in the Natural World
 - Section 01: Introduction to Chemical Ecology
 - Section 02: Communication with Pheromones
 - Section 03: Allelochemicals
- Unit 02: Agricultural Uses of Natural Chemicals
 - Section 01: Introduction to the Application of Semiochemicals
 - Section 02: Natural Source Insecticides
 - Section 03: Issues Associated with Natural Chemicals in Agriculture
- Unit 03: Clinical Uses of Natural Chemicals

- Section 01: Herbalism and the History of Medicine
- Section 02: Opium and Analgesia
- Section 03: Environmentally Sustainable Production of Plant-Derived Medicines
- Unit 04: From Forest to Pharmacy
 - Section 01: Conservation of Healing Knowledge
 - Section 02: Conservation of Biodiversity and Ecosystems

What to Expect for Each Unit

Each unit begins with an introduction and learning outcomes to situate your focus for the week. And each unit ends with a conclusion to provide a summary.

Course Schedule

It is strongly recommended that you follow the course schedule provided below. The schedule outlines what you should be working on each week of the course and lists the important due dates for the assessments. By following the schedule, you will be better prepared to complete the assessments and succeed in this course. Additional content is outlined within CourseLink for each unit.

Unit 01 Section 01 - Chemicals in the Natural World: Introduction to Chemical Ecology

Week 1 – Thursday, September 10 to Sunday, September 20

Readings

- Website: Unit 01 Overview and Section 01 content
- Ares:
 - Drijfhout (2017). Chemical Ecology. *Encyclopedia of Life Science* (selected parts).
 - Wyatt, T. (2014). Chapter 1. Animals in a chemical world. pp. 1-48. In *Pheromones and Animal Behaviour* (selected parts).

For details on which parts of each reading you need to read, consult the relevant course content.

Activities

- Familiarize yourself with the course website and online learning by selecting **Help & Resources** on the navbar.
 - Review **Outline** and **Assessments** on the course website to learn about course expectations, assessments, and due dates.
 - Confirm your access to the course reserve materials by selecting **Ares** on the navbar.
 - Complete the **Practice Test** using Respondus through the **Quizzes** tool.

Assessments

- **Initial Position Statements for Debate Papers**
 - Due: Sunday, September 20 by 11:59 pm ET
- **Unit 01 Section 01 Quiz** (accessed through the **Quizzes** tool)
 - Opens: Thursday, September 10 at 12:01 am ET
 - Closes: Sunday, September 20 by 11:59 pm ET

Unit 01 Section 02 - Chemicals in the Natural World: Communications with Pheromones

Week 2 – Monday, September 21 to Sunday, September 27

Readings

- Website: Unit 01 Section 02 content
- Ares:
 - Drijfhout (2017). Chemical Ecology. *Encyclopedia of Life Science* (selected parts).
 - Wyatt, T. (2014). Chapter 1. Animals in a chemical world. pp. 1-48. In *Pheromones and Animal Behaviour* (selected parts).
 - Wertheim et al. (2005). Pheromone-mediated aggregation in nonsocial arthropods. *Annual Review of Entomology*, 50:321-346.
 - Engl, T., & Kaltenpoth, M. (2018). Influence of microbial symbionts on insect pheromones. *Natural Product Reports*, 35(5), 386-397 (selected parts).

For details on which parts of each reading you need to read, consult the relevant course content.

Assessments

- **Literature Assignment**
 - Due: Sunday, September 27 by 11:59 pm ET
- **Unit 01 Section 02 Quiz** (accessed through the **Quizzes** tool)
 - Opens: Monday, September 21 at 12:01 am ET
 - Closes: Sunday, September 27 by 11:59 pm ET

Unit 01 Section 03 - Chemicals in the Natural World: Allelochemicals

Week 3 – Monday, September 28 to Sunday, October 4

Readings

- Website: Unit 01 Section 03 content
- Ares:
 - Dicke, M. (2000). Chemical ecology of host-plant selection by herbivorous arthropods: a multitrophic perspective. *Biochemical Systematics and Ecology*, 28: 601-617.
 - Wink, M. (2001). Secondary Metabolites: Detering Herbivores. *Encyclopedia of Life Sciences*.
 - Dinkins, C. L. P., & Peterson, R. K. (2008). A human dietary risk assessment associated with glycoalkaloid responses of potato to Colorado potato beetle defoliation. *Food and Chemical Toxicology*, 46(8), 2837-2840.
 - Whitney, H. M. & Glover, B. J. (2013). Coevolution: Plant-Insect. *Encyclopedia of Life Sciences*.
 - Hu, L., Zhang, K., Xu, Y., Zheng, X., Waterman, J. M., Ouyang, X., ... & Xu, J. (2025). Herbivory-induced green leaf volatiles increase plant performance through jasmonate-dependent plant–soil feedbacks. *Nature Plants*, 11(5), 1001-1017 (not required reading, just a recommendation).

Assessments

- **Unit 01 Section 03 Quiz** (accessed through the **Quizzes** tool)
 - Opens: Monday, September 28 at 12:01 am ET
 - Closes: Sunday, October 4 by 11:59 pm ET

Unit 02 Section 01 - Agricultural Uses of Natural Chemicals: Introduction to the Application of Semiochemicals

Week 4 – Monday, October 5 to Friday, October 9

Note: This is a shortened learning week due to the Fall Study Break. Please note the due dates carefully.

Readings

- Website: Unit 02 Overview and Section 01 content
- Ares:
 - Wyatt, T. (2014). Chapter 12. Using semiochemicals: applications of pheromones. In *Pheromones and Animal Behaviour*.
 - van Herk, W. G., Bailey, T., Saguez, J., Smith, J. L., & Farhan, Y. (2024). Evaluation of pheromone-and floral-baited traps for monitoring western corn rootworm (Coleoptera: Chrysomelidae) beetles in Canada. *Canadian Journal of Plant Science*, 105, 1-10.
 - Turlings, T.C.J., & Jurriaan, T. (2006). Exploiting scents of distress: the prospect of manipulating herbivore-induced plant odours to enhance the control of agricultural pests. *Current Opinion in Plant Biology*, 9:421-427.

Assessments

- **Unit 02 Section 01 Quiz** (accessed through the **Quizzes** tool)
 - Opens: Monday, October 5 at 12:01 am ET
 - Closes: Friday, October 9 by 11:59 pm ET

Unit 02 Section 02 - Agricultural Uses of Natural Chemicals: Natural Source Insecticides

Week 5 – Wednesday, October 14 to Sunday, October 18

Note: This is a shortened learning week due to the Fall Study Break.

Readings

- Website: Unit 02 Section 02 content
- Ares:
 - Nester, E.W., et al. (2002). 100 Years of *Bacillus thuringiensis*: A Critical Scientific Assessment. pp. 1-18. (Eugene W. Nester, Linda S. Thomashow, Matthew Metz and Milton Gordon, eds.) Copyright 2002. *American Academy of Microbiology*.

- Regnault-Roger, C. & Philogene, B. (2008). Past and current prospects for the use of botanicals and plant allelochemicals in integrated pest management. *Pharmaceutical Biology*, 46: 41-52.

Activities

- **Introduce yourself to your discussion group.** Post a brief introduction and clearly state your assigned position so that all group members are aware of their roles. *This introductory post does not count toward the required discussion posts for the debate.*

Assessments

- **Unit 02 Group Discussion** – Introduce yourself to your groups
 - Opens: Wednesday, October 14 at 12:01 am ET
 - Closes: Sunday, November 1 at 11:59 pm ET
- **Unit 02 Section 02 Quiz** (accessed through the **Quizzes** tool)
 - Opens: Wednesday, October 14 at 12:01 am ET
 - Closes: Sunday, October 18 by 11:59 pm ET

Unit 02 Section 03 - Agricultural Uses of Natural Chemicals: Issues Associated with Natural Chemicals in Agriculture

Week 6 & Week 7 – Monday, October 19 to Sunday, November 1

Readings

- Website: Unit 02 Section 03 and Conclusion content
- Ares:
 - Ames, B. N. & Gold L. S. (1990). Chemical carcinogenesis: Too many rodent carcinogens. *Proceedings of the National Academy of Science, USA*, 87: 7772-7776.
 - Ames, B. N., Profet, M. & Gold, L. S. (1990). Dietary pesticides (99.99% all natural). *Proceedings of the National Academy of Science, USA*, 87: 7777-7781.
 - Ames, B. N., Profet, M. & Gold, L. S. (1990). Nature's Chemicals and Synthetic Chemicals: Comparative Toxicology. *Proceedings of the National Academy of Science, USA*, 87: 7782-7786.

Activities

- **Write four posts for the Unit 02 Group discussion.** Contribute **two posts in Week 6** and **two posts in Week 7**. Within each week, posts should be spread out and **not both left to the final two days (Saturday and Sunday)**.

Assessments

- **Unit 02 Group Discussion** – Post a minimum of 4 posts, at least two of them must be made during Week 6
 - Opens: Wednesday, October 14 at 12:01 am ET
 - Closes: Sunday, November 1 at 11:59 pm ET
- **Unit 02 Section 03 Quiz** (accessed through the **Quizzes** tool)
 - Opens: Monday, October 19 at 12:01 am ET
 - Closes: Sunday, November 1 by 11:59 pm ET

Unit 03 Section 01 - Clinical Uses of Natural Chemicals: Herbalism and the History of Medicine

Week 8 – Monday, November 2 to Sunday, November 8

Readings

- Website: Unit 03 Overview and Section 01 content
- Ares:
 - Shurkin, J. (2014). Animals that self-medicate. *Proceedings of the National Academy of Sciences*, 111(49), 17339-17341.
 - Higby, G. J., & Urlick, B. Y. (2021). History of pharmacy. In *Remington* (pp. 3-22). Academic Press. (selected parts)

For details on which parts of each reading you need to read, consult the relevant course content.

Assessments

- **Unit 02 Debate Paper**
 - Due: Sunday, November 8 at 11:59 pm ET
- **Unit 03 Section 01 Quiz** (accessed through the **Quizzes** tool)
 - Opens: Monday, November 2 at 12:01 am ET
 - Closes: Sunday, November 8 by 11:59 pm ET

Unit 03 Section 02 - Clinical Uses of Natural Chemicals: Opium and Analgesia

Week 9 – Monday, November 9 to Sunday, November 15

Readings

- Website: Unit 03 Section 02 content
- Ares:
 - Mann, J. (2000). Drugs affecting the central nervous system. In *Murder, Magic & Medicine*.
 - James, A., & Williams, J. (2020). Basic opioid pharmacology—an update. *British journal of pain*, 14(2), 115-121.
 - Tibbetts, J. H. (2015). Turning Toxins into Treatments: Researchers use new tools to identify therapeutic ingredients in animal venom. *BioScience*, 65(10), 957-962.
 - Garber, K. (2005). Peptide leads new class of chronic pain drugs. *Nature Biotechnology*, 23(4):399.

Activities

- **Introduce yourself to your discussion group.** Post a brief introduction and clearly state your assigned position so that all group members are aware of their roles. *This introductory post does not count toward the required discussion posts for the debate.*

Assessments

- **Unit 03 Group Discussion** – Introduce yourself to your group
 - Opens: Monday, November 9 at 12:01 am ET
 - Closes: Sunday, November 29 at 11:59 pm ET
- **Unit 03 Section 02 Quiz** (accessed through the **Quizzes** tool)
 - Opens: Monday, November 9 at 12:01 am ET
 - Closes: Sunday, November 15 by 11:59 pm ET

Unit 03 Section 03 - Clinical Uses of Natural Chemicals: Environmentally Sustainable Production of Plant-Derived Medicines

Week 10 – Monday, November 16 to Sunday, November 22

Readings

- Website: Unit 03 Section 03 and Conclusion content
- Ares:
 - Nicolaou, K.C., Guy, R.K., and P. Potier. (1996). Taxoids: New Weapons against Cancer. *Scientific American*, 274(6): 94-98.
 - Cech, N. B., & Oberlies, N. H. (2023). From plant to cancer drug: lessons learned from the discovery of taxol. *Natural Product Reports*, 40(7), 1153-1157.

Activities

- **Write two posts in the Unit 03 Group Discussion.** These posts should be spread out over the week rather than both made in the final two days of week 10

Assessments

- **Unit 03 Group Discussion** – Post a minimum of 2 posts
 - Opens: Monday, November 9 at 12:01 am ET
 - Closes: Sunday, November 29 at 11:59 pm ET
- **Unit 03 Section 03 Quiz** (accessed through the **Quizzes** tool)
 - Opens: Monday, November 16 at 12:01 am ET
 - Closes: Sunday, November 22 by 11:59 pm ET

Unit 04 Section 01 - From Forest to Pharmacy: Conservation of Healing Knowledge

Week 11 – Monday, November 23 to Sunday, November 29

Readings

- Website: Unit 04 Introduction and Section 01 content
- Ares:
 - McClatchey, WC, Mahady, GB, Bennett, BC, Shiels, L, and V. Savo. (2009). Ethnobotany as a pharmacological research tool and recent developments in CNS-active natural products from ethnobotanical sources. *Pharmacology & Therapeutics*, 123: 239-254.
 - Magar, V., Robbins, M., Fernández, Ó. M. L., Ali, I. L., Anderson, B., Grob, C., ... & Iron Rope, S. (2026). Indigenous Knowledge Systems & Psychedelic Science: Towards Ethical and Reciprocal Collaboration. *Journal of Psychopharmacology*, 40(1), 179-188.



Activities

- **Write two posts in the Unit 03 Group Discussion.** These posts should be spread out over the week rather than both made in the final two days of week 11.

Assessments

- **Unit 03 Group Discussion** – Post a minimum of 2 posts
 - Opens: Monday, November 9 at 12:01 am ET
 - Closes: Sunday, November 29 at 11:59 pm ET
- **Unit 04 Section 01 Quiz** (accessed through the **Quizzes** tool)
 - Opens: Monday, November 23 at 12:01 am ET
 - Closes: Sunday, November 29 by 11:59 pm ET

Unit 04 Section 02 - From Forest to Pharmacy: Conservation of Biodiversity and Ecosystems

Week 12 – Monday, November 30 to Friday, December 4

Note: This is a shortened learning week. Please note the due dates carefully.

Readings

- Website: Unit 04 Section 02 and Conclusion content
- Ares:
 - World Resources Institute. (2005). Ecosystems and Human Well-being: Biodiversity Synthesis. *Millennium Ecosystem Assessment*.
 - IPBES, W. (2019). Intergovernmental science-policy platform on biodiversity and ecosystem services. *Summary for policy makers of the global assessment report on biodiversity and ecosystem services of the intergovernmental science-policy platform on biodiversity and ecosystem services*. IPBES Secretariat, Bonn, Germany.
 - Samal, R., & Dash, M. (2023). Ecotourism, biodiversity conservation and livelihoods: Understanding the convergence and divergence. *International Journal of Geoheritage and Parks*, 11(1), 1-20.

Assessments

- **Unit 03 Debate Paper**
 - Closes: Friday, December 4 at 11:59 pm ET
- **Unit 04 Section 02 Quiz** (accessed through the **Quizzes** tool)
 - Opens: Monday, November 30 at 12:01 am ET
 - Closes: **Friday, December 4** by 11:59 pm ET

Assessment Breakdown

Description	Weighting (%)	Due Date
Literature Assignment	12.5%	Sunday of week 2
Weekly Section Quizzes (1.5% * 10) (11 quizzes; lowest mark deleted)	15%	Sunday of each week and Friday of week 4 & 12
Unit 2 & Unit 3 Group Debate Discussions (5% each)	10%	During weeks 6 & 7 and during weeks 10 & 11
Unit 02 Debate Paper	17.5%	Sunday of week 8
Unit 03 Debate Paper	15%	Friday of week 12
Final Exam	30%	TBD

Assessment Details

Assignment

Literature Assignment

12.5%

The Literature Assignment will help to familiarize you with the process of locating relevant scientific literature. Through this assignment, you will learn how to concisely summarize the important elements of a piece of scientific research while applying important concepts from the course content.

Course Learning Outcomes Assessed: 1, 2



Quizzes

Weekly Section Quizzes

15%

At the end of each section, there is an online quiz due (see **Schedule** above for exact times and dates when they are due). You get up to four attempts for each quiz (by only redoing the incorrect questions). There are a total of 11 Section Quizzes, but the lowest grade will not count towards your final grade. Each quiz consists mostly of multiple choice, select-all and true/false questions.

Course Learning Outcomes Assessed: 1, 2, 3

Discussion

Unit 02 Group Discussion & Unit 03 Group Discussion

10%

There will be two separate online discussions, each covering a different topic. For each discussion, you will be assigned a position (i.e., a side of the topic) to argue for. Each discussion will take place over a two-week period. You will be required to make four posts for each discussion, with two posts each week. These discussions will lay the foundation for your written debate papers.

Course Learning Outcomes Assessed: 4, 5

Paper

Unit 02 Debate Paper & Unit 03 Debate Paper

17.5% & 15%

There will be two written debate papers. Each paper will focus on the same topic as the corresponding group discussion. In each paper, you will compare your opinion before and after the discussion and explain how and why your opinion changed, or why it remained the same. You will explain your current opinion using a variety of arguments, with each argument supported by relevant peer-reviewed articles and/or case studies as evidence.

Course Learning Outcomes Assessed: 1, 2, 4, 5

Tests

Final exam

30%

There will be an **in-person exam** that is computer-based and uses the Respondus LockDown Browser. Watch WebAdvisor and the CourseLink announcement section for the date, time and location.

There is a **mandatory practice test** that you are required to take before the exam.

The final exam will cover all course content, including material from readings, learning activities, and online discussions. From the readings, only content directly tied to the unit and section learning outcomes will be tested. The exam will include mostly multiple-choice questions with a few short-answer type questions.

Course Learning Outcomes Assessed: 1, 2, 3, 4, 5

Last Day to Drop Course

The final day to drop Fall 2026 courses without academic penalty is the last day of classes: December 04

After this date, a mark will be recorded, whether course work is completed or not (a zero is assigned for missed tests/assignments). This mark will show on the student's transcript and will be calculated into their average.

School of Continuing Studies - Use of Artificial Intelligence

The use of artificial intelligence (AI) in this course must align with academic integrity principles. Students are expected to complete their work independently and showcase their problem-solving abilities. Undeclared and/or unauthorized use of AI tools to produce coursework is considered a form of academic misconduct. Any misuse of AI tools, including submitting AI-generated work, may be considered academic misconduct. For specific guidelines on acceptable AI use in your course, please check with your instructor.

Review the University of Guelph's Statement on Artificial Intelligence Systems, ChatGPT, and Academic Integrity (<https://news.uoguelph.ca/2023/03/university-of-guelph-statement-on-artificial-intelligence-systems-chatgpt-academic-integrity/>) for more information.

Course-specific Use of Artificial Intelligence

Please read the University of Guelph's statement on the use of AI (<https://news.uoguelph.ca/2023/03/university-of-guelph-statement-on-artificial-intelligence-systems-chatgpt-academic-integrity/>), including ChatGPT and similar tools, and academic integrity. For this course, AI tools may be used in accordance with UoG's academic integrity policies. Misuse of AI, including using it to generate entire assignments or misrepresenting its contributions as your own, will be considered a violation of academic integrity policies.

AI tools may be used in this course to assist with generating ideas, creating draft outlines, and improving the clarity of your writing, provided that this use adheres to academic integrity standards. For a full list of acceptable AI use for this course, refer to the section "AI Use & Submission Requirements" under the Assessment section on our D2L course site.

You must include a declaration about the use of AI for the Literature Assignment and the two Debate Papers, whether you used generative AI or not. Details about the declaration can be found in the section "AI Use & Submission Requirements" under the Assessment section on our D2L course site. Additionally, if you used scientific articles for the preparation of any of your assignments, submit the pdf of each article with your assignments.

A word of caution: You are responsible for verifying the accuracy of any content generated by AI tools. These tools can produce inaccurate, false, misleading, or biased information. It is your responsibility to critically evaluate any generated content. Additionally, be cautious when providing personal or sensitive data to any AI tool.

Course Grading Policies

Submission of Assignments

Your Initial Position Statement, Literature Assignment and the Debate Papers should all be submitted electronically via the online **Dropbox** tool. When submitting your assignments using the **Dropbox** tool, do not leave the page until your assignment has successfully uploaded. To verify that your submission was complete, you can view the submission history immediately after the upload to see which files uploaded successfully. The system will also email you a receipt. Save this email receipt as proof of submission.

Be sure to keep a back-up copy of all of your assignments in the event that they are lost in transition. In order to avoid any last-minute computer problems, your instructor strongly recommend you save your assignments to a cloud-based file storage (e.g., Microsoft One Drive), or send to your email account, so that should something happen to your computer, the assignment could still be submitted on time or re-submitted.

It is your responsibility to submit your assignments on time as specified in the schedule section of this outline. Be sure to check the technical requirements and make sure you have the proper computer, that you have a supported browser, and that you have reliable Internet access. Remember that **technical difficulty is not an excuse not to turn in your assignment on time**. Don't wait until the last minute as you may get behind in your work.

If, for some reason, you have a technical difficulty when submitting your assignment electronically, please contact your instructor or CourseLink Support. (<https://support.opened.uoguelph.ca/contact>)

Late Assignment

If you choose to submit your individual assignments to the Dropbox tool late, the full allocated mark will be reduced by 10% per day after the deadline for the submission of the assignment to a limit of seven days at which time access to the Dropbox folder will be closed. Extensions will be considered for medical reasons or other extenuating circumstances. If you require an extension, discuss this with the instructor as soon as possible and well **before** the due date. Barring exceptional circumstances, extensions will not be granted once the due date has passed. These rules are not designed to be arbitrary, nor are they inflexible. They are designed to keep you organized, to ensure that all students have the same amount of time to work on assignments, and to help to return marked materials to you in the shortest possible time.

If you choose to submit your individual assignments to the **Dropbox** tool late, the full allocated mark will be reduced by 10% per day after the deadline for the submission of the assignment to a limit of six days at which time access to the **Dropbox** folder will be closed.

Turnitin

In this course, your instructor will be using Turnitin, integrated with the CourseLink **Dropbox** tool, to detect possible plagiarism, unauthorized collaboration or copying as part of the ongoing efforts to maintain academic integrity at the University of Guelph. All individual assignments submitted to the **Dropbox** tool will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. Use of the Turnitin.com service is subject to the Usage Policy posted on the Turnitin.com site.

In this course, you will not be able to screen your own assignments through Turnitin by default. However, if you wish to know your Turnitin score before the deadline of an assignment, submit the assignment to Dropbox at least 24 hours before the assignment deadline and send an e-mail to your instructor (shaerri@uoguelph.ca). She will then let you know your report and your score and help you understand the report.

Technology Requirements and Technical Support

CourseLink System Requirements

You are responsible for ensuring that your computer system meets the necessary system requirements. (<https://www.uoguelph.ca/continuing-studies/technical-requirements/>) Use the browser check (<https://courselink.uoguelph.ca/d2l/systemCheck>) tool to ensure your browser settings are compatible and up to date. (Results will be displayed in a new browser window)

Respondus LockDown Browser Requirements

Respondus LockDown Browser is a locked browser for taking exams in CourseLink. It prevents you from printing and copying; using other operating software; using search engines (e.g., going to another URL); communicating via instant messaging; and it blocks non-web-related software (e.g., Adobe PDF, Microsoft Word).

In order to use Respondus LockDown Browser, your computer system must meet the following system and software requirements (<https://www.uoguelph.ca/continuing-studies/technical-requirements/>).

If you have any concerns about meeting system requirements, contact CourseLink Support (<https://support.courselink.uoguelph.ca/contact>).

Microsoft Teams System Requirements

This course may use **Microsoft Teams** as a video communication tool. A Webcam, a microphone to record video, and headphones/speakers to play back the recording are also needed. In order to use Microsoft Teams, you must meet the following technical requirements:

1. An internet connection – broadband wired or wireless (3G or 4G/LTE);
2. Speakers and a microphone – built-in or USB plug-in or wireless Bluetooth;
3. A webcam or HD webcam - built-in or USB plug-in;

Supported mobile platforms: Android 4.4 or later and iOS 10.0 or later.

Technical Skills

As part of your online experience, you are expected to use a variety of technology as part of your learning:

- Manage files and folders on your computer (e.g., save, name, backup, rename, delete, and check properties);
- Install software, security, and virus protection;
- Use office applications (e.g., Word, PowerPoint, Excel, or similar) to create documents;
- Be comfortable uploading and downloading saved files;
- Communicate using email (e.g., create, receive, reply, print, send, download, and open attachments);
- Navigate the CourseLink learning environment and use the essential tools, such as **Dropbox**, **Quizzes**, **Discussions**, and **Grades** (the instructors for this are given in your course);
- Access, navigate, and search the internet using a web browser (e.g., Chrome, Firefox, Microsoft Edge, Safari, etc.);
- Perform online research using various search engines (e.g., Google) and library databases.

Technical Support

If you need any assistance with the software tools or the CourseLink website, contact CourseLink Support.

CourseLink Support

University of Guelph
Day Hall, Room 211
Email: courselink@uoguelph.ca
Tel: 519-824-4120 ext. 56939
Toll-Free (CAN/USA): 1-866-275-1478

Walk-In Hours (Eastern Time):

Monday to Friday: 8:30 am - 4:30 pm

Phone/Email Hours (Eastern Time):

Monday to Friday: 8:30 am - 8:30 pm
Saturday: 10:00 am - 4:00 pm
Sunday: 12:00 pm - 6:00 pm

Standard Statements for Online Courses

Acceptable Use

The University of Guelph has an Acceptable Use Policy (<https://ithelp.uoguelph.ca/policy/acceptable-use-policy>), which you are expected to adhere to.

Communicating with Your Instructor

During the course, your instructor will interact with you on various course matters in the course website using the following ways of communication:

- **Announcements:** The instructor will use Announcements on the Course Home page to provide you with course reminders and updates. Please check this section frequently for course updates from your instructor.
- **Ask Your Instructor Discussion:** Use this discussion forum to ask questions of your instructor about the content or course-related issues with which you are unfamiliar. If you encounter difficulties, the instructor is here to help you. Please post general course-related questions to the discussion forum so that all students have an opportunity to review the response. To access this discussion forum, select **Discussions** from the **Tools** dropdown menu.
- **Email:** If you have a conflict that prevents you from completing course requirements or have a question concerning a personal matter, you can send your instructor a private message by email. The instructor will generally respond to your email within 48 to 72 hours.

Netiquette Expectations

For distance education courses, the course website is considered the classroom and the same protections, expectations, guidelines, and regulations used in face-to-face settings apply, plus other policies and considerations that come into play specifically because these courses are online.

Inappropriate online behaviour will not be tolerated. Examples of inappropriate online behaviour include:

- Posting inflammatory messages about your instructor or fellow students;
- Using obscene or offensive language online;
- Copying or presenting someone else's work as your own;
- Adapting information from the Internet without using proper citations or references;
- Buying or selling term papers or assignments;
- Posting or selling course materials to course notes websites;
- Having someone else complete your quiz or completing a quiz for/with another student;
- Stating false claims about lost quiz answers or other assignment submissions;
- Threatening or harassing a student or instructor online;
- Discriminating against fellow students, instructors, and/or TAs;
- Using the course website to promote profit-driven products or services;
- Attempting to compromise the security or functionality of the learning management system;
- Sharing your username and password; and
- Recording lectures without the permission of the instructor.

Copyright Notice

Content within this course is copyright protected. Third party copyrighted materials (such as book chapters and articles) have either been licensed for use in this course or have been copied under an exception or limitation in Canadian Copyright law. The fair dealing exemption in Canada's Copyright Act permits students to reproduce short excerpts from copyright-protected materials for purposes such as research, education, private study, criticism and review, with proper attribution. Any other copying, communicating, or distribution of any content provided in this course, except as permitted by law, may be an infringement of copyright if done without proper license or the consent of the copyright owner. Examples of infringing uses of copyrighted works would include uploading materials to a commercial third-party web site, or making paper or electronic reproductions of all, or a substantial part, of works such as textbooks for commercial purposes. Students who upload to CourseLink copyrighted materials such as book chapters, journal articles, or materials taken from the Internet, must ensure that they comply with Canadian Copyright law or with the terms of the University's electronic resource licenses. For more information about students' rights and obligations with respect to copyrighted works, review Copyright at the University of Guelph (<https://www.lib.uoguelph.ca/scholarship-publishing/copyright-university-guelph/>).

Standard Statements for Open Learning Program Students

As a student at the University of Guelph, it is important to understand your rights and responsibilities and the academic rules and regulations that you must abide by.

Open Learning program (OLp) students are required to follow the same Senate-approved academic regulations as University of Guelph undergraduate students. For information on academic misconduct, academic accessibility accommodations, academic accommodation of religious obligations, and withdrawal procedures, consult Academic Policies and Procedures (<https://www.uoguelph.ca/continuing-studies/academic-policies/>) and Withdrawals, Refunds, and Transfers (<https://www.uoguelph.ca/continuing-studies/withdrawals-refunds-transfers/>) on the School of Continuing Studies website. You may also contact the School of Continuing Studies' Learner Success Advisor (scs-counsellor@uoguelph.ca) for assistance.

Standard Statements for Undergraduate Courses

Academic Integrity

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.

The Academic Misconduct Policy (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-misconduct/>) is outlined in the Undergraduate Calendar.

Accessibility

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student.

When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required; however, interim accommodations may be possible while that process is underway.

Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability. Use of the SAS Exam Centre requires students to make a booking at least 10 business days in advance, and no later than November 1 (fall), March 1 (winter) or July 1 (summer). For students at the Guelph campus, information can be found on the SAS website. (<https://www.uoguelph.ca/sas>)

Accommodation of Religious Obligations

If you are unable to meet an in-course requirement due to religious obligations, please email the course instructor within two weeks of the start of the semester to make alternate arrangements.

See the Academic calendar for information on regulations and procedures for Academic Accommodations of Religious Obligations (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-accommodation-religious-obligations/>).

Copies of Out-of-class Assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

Drop Date

Students will have until the last day of classes to drop courses without academic penalty. The deadline to drop two-semester courses will be the last day of classes in the second semester. This applies to all undergraduate students except for Doctor of Veterinary Medicine and Associate Diploma in Veterinary Technology (conventional and alternative delivery) students. The regulations and procedures for course registration are available in the Undergraduate Calendar - Dropping Courses (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/dropping-courses/>).

Email Communication

As per university regulations, all students are required to check their <uoguelph.ca> e-mail account regularly: e-mail is the official route of communication between the University and its students.

Health and Wellbeing

The University of Guelph provides a wide range of health and wellbeing services at the Vaccarino Centre for Student Wellness (<https://wellness.uoguelph.ca/>). If you are concerned about your mental health and not sure where to start, connect with a Student Wellness Navigator (<https://wellness.uoguelph.ca/navigators>) who can help develop a plan to manage and support your mental health or check out our mental wellbeing resources (<https://wellness.uoguelph.ca/shine-this-year>). The Student Wellness team are here to help and welcome the opportunity to connect with you.

Illness

Medical notes will not normally be required for singular instances of academic consideration, although students may be required to provide supporting documentation for multiple missed assessments or when involving a large part of a course (e.g., final exam or major assignment).



Recording of Materials

Presentations that are made in relation to course work—including lectures—cannot be recorded or copied without the permission of the presenter, whether the instructor, a student, or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

Resources

The Academic Calendars (<http://www.uoguelph.ca/registrar/calendars/?index>) are the source of information about the University of Guelph's procedures, policies and regulations which apply to undergraduate, graduate and diploma programs.

When You Cannot Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. See the Undergraduate Calendar for information on regulations and procedures for Academic Consideration. (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-consideration-appeals-petitions/>)