

Department of Physiology and Pharmacology  
Physiology 1021

Course Syllabus for Fall/Winter 2023



Western University is committed to a **thriving campus**; therefore, your health and wellness matter to us! The following link provides information about the resources available on and off campus to support students: <https://www.uwo.ca/health/> Your course coordinator can also **guide you** to resources and/or services should you need them.

1. Technical Requirements



Stable internet connection



Laptop or computer

2. Important Dates



Classes Begin	Reading Week	Classes End	Study day(s)	Exam Period
September 7	October 30– November 5	December 8	December 9	December 10–22

September 29, 2023 is National Day for Truth and Reconciliation and is a non-instructional day  
November 30, 2023: Last day to drop a full course without penalty

Classes Resume	Reading Week	Classes End	Study day(s)	Exam Period
January 8	February 17-25	April 8	April 9-10	April 11–30

3. Contact Information



Course Coordinator	Contact Information
Dr. Angela Beye	abeye2@uwo.ca

Other Course Instructor(s)	Contact Information
Dr. Christine Bell	christine.bell@uwo.ca
Dr. Stefan Everling	severlin@uwo.ca
Dr. Oana Birceanu	obircean@uwo.ca
Dr. Anita Woods	anita.woods@uwo.ca

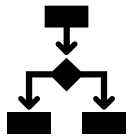
## 4. Course Description and Design

### Delivery Mode: in-person

An introductory course outlining the principles of human/mammalian physiology along with a general survey of various physiological systems (e.g., cardiovascular, renal, neural, motor, gastrointestinal, endocrine, respiratory, etc.). Limited to students enrolled in first year Kinesiology and first year Bachelor of Science (Foods and Nutrition). 2 lecture hours, 1 tutorial hour. Prerequisite(s): Grade 12U Biology or equivalent. Grade 12U Chemistry recommended. Antirequisite(s): Physiology 1020, 2130, 3120, Physiology/Pharmacology 2000

Physiology 1021 is designed to help you learn the basic facts, concepts, and principles that are essential to your understanding of the function of the human body, so that you will be able to use that knowledge to solve physiological problems. Because many of you who are enrolled in this course intend to pursue careers related to health, the course will place some emphasis on clinical scenarios and disease (pathophysiology).

### Timetabled Sessions



Component	Date(s)	Time
Lectures	Tues & Thurs	9:30 AM – 10:20 AM in NSC Room 145
Tutorials	Tues, Wed, or Thurs	Depends on tutorial section enrolled

- Asynchronous pre-work, such as pre-lecture videos, must be completed prior to lectures.
- A PowerPoint recording of a lecture will be provided for two weeks following the lecture in case of absence. We will do our best to record class lectures but cannot guarantee every lecture will be posted should technical difficulties arise.
- Closed captioning will be provided for lecture recordings.

All course material will be posted to OWL: <http://owl.uwo.ca>. Any changes will be indicated on the OWL site and discussed with the class.

If students need assistance, they can seek support on the [OWL Help page](#). Alternatively, they can contact the [Western Technology Services Helpdesk](#). They can be contacted by phone at 519-661-3800 or ext. 83800.

[Google Chrome](#) or [Mozilla Firefox](#) are the preferred browsers to optimally use OWL; update your browsers frequently. Students interested in evaluating their internet speed, please click [here](#).

## 5. Learning Outcomes

Upon successful completion of this course, students will be able to:

- Describe the functions of the nervous, sensory, endocrine, muscular, cardiovascular, renal, respiratory, gastrointestinal, and reproductive systems of the human body at the organ and cellular level
- Predict how these organs and organ systems will respond to a problem or pathology/disease to maintain homeostasis
- Integrate information from lectures to identify how organs and organ systems work together to maintain health and homeostasis

There are a few general objectives that you should always keep in mind as you study. You will be expected to be able to recall or recognize facts, concepts, or physiological principles. The ability to recall, however, is not so useful unless you can do something with the information that you have learned. Therefore, you should also be able to use your knowledge to explain physiological function.



Most important, of course, is your ability to use your knowledge to predict the consequences of alterations to normal physiological function or to predict changes in physiological systems. Not only are these latter objectives the most useful skills you can learn, but they are also the most interesting. Therefore, the type of effort you put into learning the course material will affect how well you do at applying what you have learned. We will be teaching you about different study methods to achieve the goal of long-term retention and a deep understanding of the course material, instead of just trying to memorize for the short-term.

## 6. Course Content and Schedule

### Semester 1

Week	Dates	Topic	Instructor
1	Sept 7	Excitable Cells 1	Dr. Beye
2	Sept 12, 14	Excitable Cells 2 & 3	Dr. Beye
3	Sept 19, 21	Excitable Cells 4 & 5	Dr. Beye
4	Sept 26, 28	Endocrine Phys 1 & 2	Dr. Bell
5	Oct 3, 5	Endocrine Phys 3 & 4	Dr. Bell
6	Oct 10, 12	Sensory Phys 1 & 2	Dr. Everling
7	Oct 17, 19	Sensory Phys 3 & 4	Dr. Everling
8	Oct 24, 26	Motor Control 1 & 2	Dr. Everling
9	<b>Oct 30- Nov 5</b>	<b>Reading Week</b>	<b>N/A</b>
10	Nov 7, 9	Skeletal Muscle Phys 1 Skeletal Muscle Phys 2	Dr. Birceanu
11	Nov 14, 16	Smooth Muscle Phys Autonomic Nervous System	Dr. Birceanu
12	Nov 21, 23	Cardiovascular Phys 1 & 2	Dr. Beye
13	Nov 28, 30	Cardiovascular Phys 3 & 4	Dr. Beye
14	Dec 5, 7	Cardiovascular Phys 5 & 6	Dr. Beye



### Semester 2

Week	Dates	Topic	Instructor
1	Jan 9, 11	Renal Phys 1 & 2	Dr. Woods
2	Jan 16, 18	Renal Phys 3 & 4	Dr. Woods
3	Jan 23, 25	Renal Phys 5 & 6	Dr. Woods
4	Jan 30, Feb 1	Integrative Phys 1 Respiratory Phys 1	Dr. Woods Dr. Beye
5	Feb 6, 8	Respiratory Phys 2 & 3	Dr. Beye
6	Feb 13, 15	Respiratory Phys 4 & 5	Dr. Beye
7	<b>Feb 17–25</b>	<b>Reading Week</b>	<b>N/A</b>
8	Feb 27, 29	Integrative Phys 2 Gastrointestinal Phys 1	Dr. Beye Dr. Woods

9	Mar 5, 7	Gastrointestinal Phys 2 & 3	Dr. Woods
10	Mar 12, 14	Gastrointestinal Phys 4 & 5	Dr. Woods
11	Mar 19, 21	Gastrointestinal Phys 6 Reproductive Phys 1	Dr. Woods Dr. Bell
12	Mar 26, 28	Reproductive Phys 2 & 3	Dr. Bell
13	Apr 2, 4	Reproductive Phys 4 Integrative Phys 3	Dr. Bell

## 7. Participation and Engagement

I know first year can feel intimidating, but we've built in opportunities for you to get to know other students in the course, your teaching assistant, as well as your instructors. All of these resources will be helpful to keep you motivated and feeling supported.



- Students are expected to participate and engage with lecture content as much as possible
- Students should participate during tutorial sessions in group activities with their small group and feel comfortable asking or answering questions posed by their teaching assistant
- Students can also participate by interacting in the discussion forums with their peers, teaching assistant, and instructors
- Students can also participate by attending weekly office hours with Dr. Beye and other instructors

## 8. Evaluation

Below is the evaluation breakdown for the course. Any deviations will be communicated.



Assessment	Format	Weighting	Due Date
**PeerWise Assignment #1	<b>Author</b> 2 original multiple choice questions (4 answer choices) on content from <b>Excitable Cell and Endocrine lectures</b>  <b>Answer</b> 5 multiple choice questions in PeerWise	1%	Author: Tues, Oct 10  Answer: Thurs, Oct 12
Online Quiz #1	Online in OWL. Questions taken from PeerWise Assignment 1.	2%	Opens Mon, Oct 16 at 4 PM until Tues, Oct 17 at 11:55 PM
Midterm #1	In-person multiple choice test. Covers Excitable Cells lecture 1 to end of Sensory lecture 2.	16%	Friday, Oct 20, 6-7 PM
**PeerWise Assignment #2	<b>Author</b> 2 original multiple choice questions (4 answer choices) on content from <b>Sensory, Motor control, Muscle, ANS, Cardiovascular lectures</b>  <b>Answer</b> 5 multiple choice questions in PeerWise from the content stated above	1%	Author: Tues, Nov 28  Answer: Thurs, Nov 30

Online Quiz #2	Online in OWL. Questions taken from PeerWise Assignment 2.	2%	Opens Mon, Dec 4 at 4 PM until Tues, Dec 5 at 11:55 PM
Midterm #2	In-person multiple choice test. Covers Sensory lecture 3 to end of Cardiovascular lecture 6.	16%	December exam period
**PeerWise Assignment #3	<b>Author</b> 2 original multiple choice questions (4 answer choices) on content <b>from Renal, Integrative Phys 1, and Respiratory lectures</b>  <b>Answer</b> 5 multiple choice questions in PeerWise from the content stated above	1%	Author: Tues, Feb 13  Answer: Thurs, Feb 15
Online Quiz #3	Online in OWL. Questions taken from PeerWise Assignment 3.	2%	Opens Mon, Feb 26 at 4 PM until Tues, Feb 27 at 11:55 PM
Midterm #3	In-person multiple choice test. Covers Renal to end of Integrative Phys lecture 2.	16%	Friday, Mar 1, 6-7PM
**PeerWise Assignment #4	<b>Author</b> 2 original multiple choice questions (4 answer choices) on content <b>from Gastrointestinal and Reproductive lectures</b>  <b>Answer</b> 5 multiple choice questions in PeerWise from the content stated above	1%	Author: Tues, Mar 26  Answer: Thurs, Mar 28
Online Quiz #4	Online in OWL. Questions taken from PeerWise Assignment 4.	2%	Opens Mon, Apr 1 at 4 PM until Tues, Apr 2 at 11:55 PM
Final Exam	In-person multiple choice exam. Cumulative covering the entire year; greatest emphasis on material not tested yet.	30%	April exam period
Weekly Concept Checkpoint	Online in OWL. Answer the concept checkpoint for each week. No grade penalty if answered incorrectly, marked only on completion.	5%	Weekly
Tutorial Attendance		5%	Weekly

\*\*For PeerWise assignments, **please see the PeerWise tab on OWL for detailed instructions.** There are no part marks for only completing part of this assignment by the deadlines indicated.

- All PeerWise assignments, concept checkpoints, and quizzes are due at **11:55 PM EST.**
- PeerWise assignments will be completed on <https://peerwise.cs.auckland.ac.nz>
- PeerWise assignments will be reviewed by Dr. Beye for originality checks to ensure questions were authored by each student and not shared or taken from internet resources or previous exams. If not an original question, a grade of zero will be given on that

assignment. Please see additional instructions for PeerWise assignments on the PeerWise tab on OWL.

- Concept checkpoints are due on the Monday the week after it was released. See Course Questions tab on OWL for details.
- After any grade is posted, students should wait 24 hours to reflect before contacting Dr. Beye; to ensure a timely response, please reach out within 7 days.
- Any grade appeals on assignments, quizzes, or midterms **must be received** within 3 weeks of the grade being posted.
- 15% of your course grade will be evaluated and returned 3 days prior to the drop deadline (statement in policies below).

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

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

**Information about late or missed evaluations** (*please read carefully*):

**\*\*documentation is not to be submitted to academic counselling if you will miss any assignment worth less than 10%. This includes PeerWise assignments, quizzes, weekly checkpoints, or tutorials. Instead, these will be handled as follows:**

- There are **no makeup PeerWise** assignments offered due to several weeks of time given to complete them. If the assignment is not completed, a grade of zero will be given. Please do these early since you never know what circumstances, such as illness, may arise on the day it is due.
- Students are **permitted to miss 5 weekly checkpoints** without penalty. **At least 50% of the checkpoints must be completed**, otherwise a grade of zero will be assigned for this component.
- There are no makeup **quizzes**. Instead, the weight of that quiz (2%) will be transferred onto the next exam that the student writes in the course. For example, if quiz 2 is missed, midterm 2 will be worth 18% rather than 16%.
- Students are **permitted to miss 5 tutorials** without penalty. If more than 5 tutorials are missed, the 5% assigned to this component will be equally distributed to the 4 exams in the course.

**Since exams are worth more than 10%, documentation must be submitted to academic counselling if a student is unable to write (please see section 14)**

- A **make-up exam** will be offered to students who have received academic accommodations for approved absences, as follows:
  - Tentative date: Thursday, Oct 26 (time TBA): Makeup Midterm 1
  - Tentative date: Scheduled by department in early January: Makeup Midterm 2
  - Tentative date: Thursday, Mar 7 (time TBA): Makeup Midterm 3The makeup final exam will be scheduled by the department in May 2024. *All of these dates are tentative and subject to change.*

**Only one makeup is offered for each exam.** If a student's documentation covers an absence for both the regular exam and makeup exam, the weight of that exam will be added to the final exam in the course.

- ✓ Any exams or makeup exams that are missed without documentation approved by academic counselling will receive a grade of 0 on that evaluation.
- ✓ **At least TWO midterms must be written to be permitted to write the final exam in the course.**
- ✓ At the end of the course, the lowest exam grade will be automatically reweighed by reducing that exam by 6% and applying that equally to the other exams written in the course. For example, if midterm 1 is your lowest grade, it will be worth 10%, making the other two midterms worth 18% and the final exam worth 32%.

**INC (Incomplete Standing):** If a student has been approved by the Academic Counselling Office (in consultation with the instructor/department) to complete term work at a later date, an INC will be assigned. Students with INC will have their course load in subsequent terms reduced to allow them to complete outstanding course work. Students may request permission from Academic Counselling to carry a full course load for the term the incomplete course work is scheduled.

**SPC (Special examination):** If a student has been approved by the Academic Counselling Office to write a Special Examination and the final exam is the only outstanding course component, an SPC will be assigned. If the class has a makeup exam, the student is expected to write the makeup exam. If the class doesn't have a makeup exam or the student misses the makeup exam for reasons approved by the Academic Counselling Office, the student will write the exam the next time the course is offered. Outstanding SPCs will reduce the course load for the term the exam is deferred as outlined in [Types of Examinations](#) policy.

## 9. Communication



- ✓ Students should check the OWL site every 24–48 hours.
- ✓ A weekly update will be provided on the OWL announcements tab.
- ✓ Students should email Dr. Beye ([abeye2@uwo.ca](mailto:abeye2@uwo.ca)) with questions about the course structure or assignments, but an attempt to locate that information on the syllabus or OWL should be made first.
- ✓ Emails sent to Dr. Beye will be monitored during regular business hours; students will receive a response within 24 – 72 hours.
- ✓ Students should post all lecture content questions on the OWL discussion forums so that everyone can access the questions and responses. These are monitored Monday – Friday by the instructors and/or teaching assistants.

## 10. Office Hours



- ✓ Dr. Beye's **office hours** will be held remotely using Zoom. Dates and times will be posted on OWL. Students will be able to sign up for an individual appointment with Dr. Beye using the Sign Up tool on OWL (10 min appts).
- ✓ Students will be able to attend group drop-in sessions with Dr. Beye, known as *Mentoring Monday's*, on the **1st Monday of each month at 4 PM** via Zoom. These will be held if there is considerable interest. More details will be available in OWL announcements the week before each session.
- ✓ Mentoring Monday's will be recorded and posted for everyone to view.
- ✓ Office hours scheduling for other instructors will be posted on OWL.

## 11. Resources



- ✓ Required workbook from UWO Bookstore: Physiology 1021: Introduction to Human Physiology Custom Workbook for 2023-2024. You should bring this workbook to class. The cost is \$42.00.

<https://bookstore.uwo.ca/product/m12229>

## 12. Professionalism & Privacy



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

- ✓ All course materials created by the instructors are copyrighted and cannot be sold/shared (e.g., Must Knows Facebook group, Course Hero, Chegg, etc.)
- ✓ Recordings are not permitted (audio or video) without explicit permission
- ✓ Permitted recordings are not to be distributed
- ✓ Students will be expected to take an academic integrity pledge before some assessments

Western is committed to providing a learning and working environment that is free of harassment and discrimination. All **students**, staff, and faculty have a role in this commitment and have a responsibility to ensure and promote a safe and respectful learning and working environment. Relevant policies include Western's [Non-Discrimination/Harassment Policy \(M.A.P.P. 1.35\)](#) and [Non-Discrimination/Harassment Policy – Administrative Procedures \(M.A.P.P. 1.35\)](#).

Any **student**, staff, or faculty member who experiences or witnesses' behaviour that may be harassment or discrimination **must report the behaviour** to the Western's [Human Rights Office](#). Harassment and discrimination can be human rights-based, which is also known as EDI-based, (sexism, racism, transphobia, homophobia, islamophobia, xenophobia, antisemitism, and ableism) or non-human rights-based (personal harassment or workplace harassment).

## 13. How to Be Successful in this Class

Students in this class should understand the level of independence and self-discipline required to be successful.



1. **Invest in a day planner** to keep track of your courses and assignment deadlines. Populate all of your deadlines at the start of the term and schedule time at the start of each week to get organized and manage your time.
2. Make it a **daily habit to log onto OWL** to ensure you have seen everything posted.
3. **Follow weekly checklists** to help you stay on track.
4. **Take notes** as you go through the material. Keeping handwritten notes will help you learn more effectively than just reading or listening in lecture. *Note: typed notes work too, but the literature suggests handwritten notes are a more effective learning strategy.*
5. **Connect with others.** Try forming a study group and meet on a weekly basis for studying and peer support. Tutorials are also a great place to get to know your peers, learn good study habits, and form supportive networks that might last for years.
6. **Do not be afraid to ask questions.** We welcome questions in class. Or if you are struggling with a topic, check the online discussion forums and post your questions there. You will be anonymous to your peers. Feel free to answer other questions posted in the discussion forum too! Your teaching assistant will answer questions in tutorial sessions.
7. **Make connections between lectures.** You should build in study time every week for this course. Try making flow charts, diagrams, comparisons, and big picture summaries.
8. **Reward yourself** for successes. It seems easier to motivate ourselves knowing that there is something waiting for us at the end of the task.
9. Try to **keep a weekly routine.** Consistent wake-up times, regular exercise, and building in some enjoyable activities will help break up your week to balance academics and your own personal health and well-being.



## 14. Western Academic Policies and Statements

### Absence from Course Commitments

#### A. Absence for medical illness:

Students must familiarize themselves with the [Accommodation for Illness Policy](#).

A student seeking academic accommodation for any **work worth less than 10%** must follow the course specific instructions provided on the course outline. **Please see section 8 for details on how missed assignments worth less than 10% will be addressed this year.**

If you are unable to meet a course requirement for any **work worth 10% or greater** due to illness or other serious circumstances, you must provide valid medical or other supporting documentation to the Academic Counseling as soon as possible and contact your instructor immediately. It is the student's responsibility to make alternative arrangements with their instructor once the accommodation has been approved and the instructor has been informed. Please note that the format of a make-up test, exam, or assignment is at the discretion of the course coordinator.

A student requiring academic accommodation due to illness should use the Student Medical Certificate when visiting an off-campus medical facility or request a Record's Release Form (located in the Dean's Office) for visits to Student Health Services. The form can be found at: [http://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/medicalform.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf)

#### B. Absence for non-medical reasons:

Student absences might also be approved for non-medical reasons such as religious holidays and compassionate situations. Please review the policy on [Accommodation for Religious Holidays](#). All non-medical requests must be processed by Academic Counselling. Not all absences will be approved; pay attention to the academic calendar and final exam period when booking any trips.

#### C. Special Examinations

A Special Examination is any examination other than the regular examination, and it may be offered only with the permission of the Dean of the Faculty in which the student is registered, in consultation with the instructor and Department Chair. Permission to write a Special Examination may be given on the basis of compassionate or medical grounds with appropriate supporting documents. To provide an opportunity for students to recover from the circumstances resulting in a Special Examination, the University has implemented Special Examinations dates. These dates as well as other important information about examinations and academic standing can be found [here](#).

### Academic Offenses

Scholastic offences are taken seriously, and students are directed [here](#) to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence.

### Accessibility Statement

Please contact the course instructor if you require material in an alternate format or if you require any other arrangements to make this course more accessible to you. You may also wish to contact Accessible Education (AE) at 661-2111 x 82147 for any specific question regarding an accommodation or review [The policy on Accommodation for Students with Disabilities](#)

## Correspondence Statement

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. You can read about the privacy and security of the UWO email accounts [here](#).

## Discovery Credit Statement

Students are permitted to designate up to 1.0 Discovery Credit course (or equivalent) for pass/fail grading that can be counted toward the overall course credits required for their degree program. The details of this policy and the deadlines can be found [here](#). *Note: first-year students are not eligible*

## 15% Rule

According to the [Evaluation of Academic Performance](#) policy, at least three days prior to the deadline for withdrawal from a 1000- or 2000-level course without academic penalty, students will receive an assessment of work accounting for at least 15% of their final grade. Generally, students can expect some form of feedback on their performance in a course before the drop date. In rare instances, at the Dean's discretion, an exemption can be issued, which also must be noted in the course syllabus. Deans should review exemptions on a course-by-course basis each time an exempted course is offered.

## 15. BMSUE Academic Policies and Statements

### Cell Phone and Electronic Device Policy (for in-person tests and exams)

The Schulich School of Medicine & Dentistry is committed to ensuring that testing and evaluation are undertaken fairly across all our departments and programs. For all tests and exams, it is the policy of the School that any electronic devices, i.e., cell phones, tablets, cameras, smart glasses, watches, or iPod are strictly prohibited. These devices **MUST** be left either at home or with the student's bag/jacket at the front of the room and **MUST NOT** be at the test/exam desk or in the individual's pocket. Any student found with one of these prohibited devices will receive a grade of zero on the test or exam. Non-programmable calculators are only allowed when indicated by the instructor. The program is not responsible for stolen/lost or broken devices.

### Copyright and Audio/Video Recording Statement

Course material produced by faculty is copyrighted and to reproduce this material for any purposes other than your own educational use contravenes Canadian Copyright Laws. You must always ask permission to record another individual and you should never share or distribute recordings.

### Rounding of Marks Statement

Across the Basic Medical Sciences Undergraduate Education programs, we strive to maintain high standards that reflect the effort that both students and faculty put into the teaching and learning experience during this course. All students will be treated equally and evaluated based only on their actual achievement. **Final grades** on this course, irrespective of the number of decimal places used in marking individual assignments and tests, will be calculated to one decimal place and rounded to the nearest integer, e.g., 74.4 becomes 74, and 74.5 becomes 75. Marks **WILL NOT** be bumped to the next grade or GPA, e.g., a 79 will **NOT** be bumped up to an 80, an 84 **WILL NOT** be bumped up to an 85, etc. The mark attained is the mark you achieved, and the mark assigned; requests for mark "bumping" will be denied.

## 16. Support Services

The following links provide information about support services at Western University.

[Academic Counselling \(Foods and Nutrition Brescia campus\)](#)

[Academic Counselling \(Foods and Nutrition main campus-Faculty of Science\)](#)

[Academic Counselling \(Kinesiology\)](#)

[Grade Appeal Procedures](#)

[Registrar Services](#)

[Academic Support & Engagement Services](#)

[Student Health Services](#)

Many other supports are provided under the iCare tab on OWL.

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).