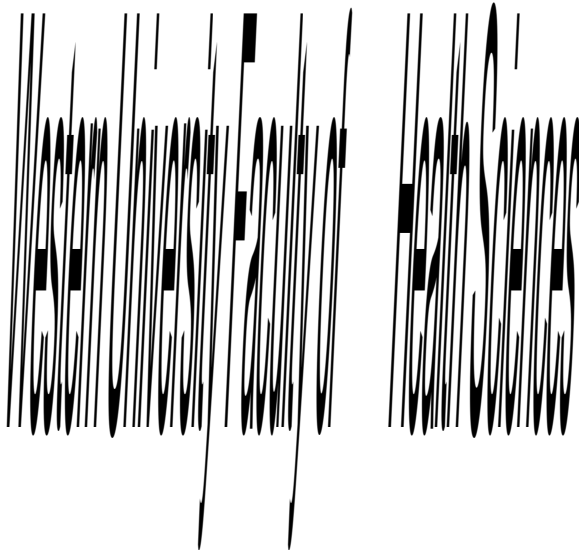




Office	Daniel Keir TH-4155	Lectures	Monday
Email	dkeir@uwo.ca	Delivery Type	In-person
Phone	519-661-2111 (ext. 87962)		
Office Hours	TBA		
Lab Instructor	Michael Herbert		
Office	TH-4180	Laboratory	weekly
Email	mherber5@uwo.ca	Delivery Type	In-person
Phone	519-661-2111 (ext. 88675)		
Office Hours	TBA		



1. Course Description

The most important requirement for exercise performance is the transport of oxygen (O_2) to support the bioenergetic processes in muscle cells and elimination of carbon dioxide (CO_2) formed as a by-product of muscle metabolism. Thus, an appropriate respiratory and cardiovascular response is necessary to meet the demands imposed by increases in muscle metabolism. This course will explore the use of non-invasive (respiratory gas exchange) and minimally invasive (blood sampling) techniques and specialized exercise testing to provide an experiential and mechanistic basis for: i) understanding integrative responses to exercise at different intensities; ii) evaluation of fitness and performance; iii) exercise prescription; and iv) development of effective exercise interventions in research and practical (e.g., exercise training) settings.

Laboratory protocols will allow students to collect, analyze, and interpret exercise test data, correctly evaluate aerobic fitness, (e.g., maximal O_2 uptake, O_2 uptake kinetics, lactate threshold, critical power), recognize normal intensity-dependent physiological response profiles (blood lactate and gas exchange responses), and accurately prescribe aerobic and anaerobic exercise. Lab data and protocols will be written-up and submitted as a “manuscript-style” lab report. Students will receive feedback on written work to allow them to develop their scientific writing skills.

2. Learning Outcomes

By the end of the course, students should be able to:

9	Aerobic exercise prescription
10	Near-infrared spectroscopy
11	Blood lactate
12	Laboratory determinants of performance
13	REVIEW FOR FINAL EXAM

3.2. Lab

Each lab runs for 1 or 2 weeks as indicated in the Table below. You attend one lab every week. Lab

5. Course Evaluation Plan:

Grades are a measure of the performance of a student in individual courses. Each student shall be judged on how well they have command of the course materials.

Component	Category	Value
I	Lab Assignments	30%
II	Scientific Manuscript	40%
III	Lab Exam	30%

Grades are a measure of the performance of a student in individual courses. Each student shall be judged on their knowledge and command of the course materials.

Lab Assignments	Value: 30%	Dates: See below
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Lab Assignment #1 5% analysis and interpretation of data collected in Protocol 1

Lab Assignment #2

Lab Assignment #3

Lab Assignment #4

Lab Assignment #5

Lab Assignment #6

4. Academic Considerations and Absences from Lectures and Assessments

Religious Accommodation: When a course requirement conflicts with a religious holiday that requires

5. Contingency Plan for an In-Person Class Pivoting to 100% Online Learning

In the event of a situation that requires this course to pivot to online content delivery, 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 grading scheme will **not** change. Any remaining assessments will also be conducted online as determined by the course instructor

Note that disruptive behavior of any type during online classes, including inappropriate use of the chat function, is unacceptable. Students found guilty of Zoom-bombing a class or of other serious online offenses may be subject to disciplinary measures under the Code of Student Conduct.

6. Online Proctoring

Tests and examinations in this course may be conducted using a remote proctoring service. By taking this course, you are consenting to the use of this software and acknowledge that you will be required to provide **personal information** (including some biometric data) and the session will be **recorded**. Completion of this course will require you to have a reliable internet connection and a device that meets the technical requirements for this service. More information about this remote proctoring service, including technical requirements, is available on Western's Remote Proctoring website at: <https://remoteproctoring.uwo.ca>.

7. Grades

Where possible assignment objectives and rubrics will be posted on OWL.

Generally, students can expect some form of feedback on their performance in a course before the drop date.

November 13th, 2023 (for first term half-courses)

November 30th, 2023 (for full-year courses)

March 7th, 2024 (for second term half-or full year courses)

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

Rounding of Grades (for example, bumping a 79 to 80%): This is a practice some students request. The final grade documented is the grade that you have achieved. There is no rounding to the next grade level, or 'giving away' of marks. Please don't ask me to do this for you; the response will be "please review the course outline where this is presented".

Appealing a Grade Within this Course: You have the right to appeal any grade within this course. The grounds for a grade appeal may be one or more of: medical or compassionate circumstances, extenuating circumstances beyond the student's control, bias, inaccuracy, or unfairness. All grounds advanced in a request for relief must be supported by a clear and detailed explanation of the reasons for the request together with all supporting documentation.

Appeals generally proceed in this order:

1. Course instructor (informal consultation)
2. Department Chair (submission of written request)
3. The Dean of the Faculty (submission of written request)

In the case of perceived procedural unfairness, steps 2 and 3 are carried out within the Department and Faculty offering the course. In the case of extenuating medical or compassionate circumstances that impact on a grade, steps 2 and 3 are carried out within a student's Home Department and Faculty.

