School of Kinesiology
Faculty of Health Sciences
Western University

LABORATORY IN EXERCISE PHYSIOLOGY
Kin 3330F
Fall, 2017

Instructor: J.M. Kowalchuk, PhD — Office: HSB 411C
Lab Coordinator: M. Herbert, MHK, CSEP-CEP, RKin — Office: 3M Centre 2225E

Lecture: FIMS & Nursing Bldg, Room 1270
M; 8:30-9:30

Office Hours: by appointment (after first meeting with GTA)

Laboratory: TH 2108
M, 2:30-4:30
W, 4:30-6:30
F, 8:30-10:30

GTA: TBA — Phone:
GTA Email: TBA — Email: jkowalch@uwo.ca

NOTE: All course information including grades, assignment outlines, deadlines, etc. are available via OWL.

Calendar Description: This course focuses on experiments designed to highlight the physiological response to exercise, and to introduce basic techniques for evaluation and monitoring of these responses.

Course Description: This course introduces techniques used in exercise, research and fitness settings for evaluating and monitoring a person's physiological response to exercise of varying intensities to better understand how the laboratory protocols and techniques can be used to assess underlying physiological and metabolic responses to exercise. Laboratory protocols are designed as "mini-experiments" and students are required to collect and analyse data, and to describe and interpret the data to reflect the underlying "physiology and metabolism" of the response. Certain

Priority is given to students enrolled in the BSc Honours Specialization in Kinesiology

You are responsible for ensuring that you have successfully completed all course pre-requisites, and that you have not taken an anti-requisite course (if applicable). Lack of a pre-requisite or the completion of an anti-requisite cannot be used as a basis for appeal. If you are found ineligible for

Course Laboratory Manual – individual laboratory protocols will be posted on the Kin 3330 course OWL

Textbook assigned in Kin 2230 (or any other suitable textbook in Exercise Physiology)

Learning Objectives:
Upon completion of this course students will be able to:
1. have a better understanding of the physiological and metabolic responses i) associated with non-steady-state and steady-state exercise, and ii) at different intensities and domains of exercise
2. understand and be competent at using specific laboratory equipment and techniques for measuring and monitoring the physiological and metabolic responses to exercise
3. collect and analyse data in a laboratory setting, and interpret these data to help understand the underlying "physiology and metabolic" processes
4. describe and report the data and responses collected in a laboratory setting and to explain and compare these responses using data from the published literature

Course Evaluation:
Theory Exam: 25% (set in examination period by Registrar's Office)

Laboratory Major Reports: 60% (2 major laboratory reports @ 30% each)
- Lab report #1 due TBA (usually in TBD)
- Lab report #2 due TBA (usually in TBD)

Laboratory Assignments: 10% (assignments @ 5% each – questions posted on OWL)
5% (completed and approved data sheets and calculations)

Course & University Policies
1. Assignment Deadlines: Laboratory reports are to be handed in the Coca-Cola laboratory (or as specified in lecture) on the assigned due date (to coincide with the start of the laboratory, or as specified in lecture). Assignments must be handed in at the start of your assigned laboratory section on the due date (or as specified in lecture). Electronic submission of assignments will not be accepted (unless otherwise specified) under any circumstances. Assignments will not be accepted late, except under medical or other compassionate circumstances. Submitting a late assignment without appropriate documentation will result in a zero (0) grade. Appropriate documentation for missed/late assignments must be submitted to the course instructor and to the Kinesiology Undergraduate office.

2. Grades: Assignments will be returned to students. The final examination will not be returned but students are able to view their exams by making an appointment with the GTA. Should you have a concern regarding the grade you received on an assignment or final examination or feel that it is unfair in any way, you must wait 24 hours from the receipt of the assignment to approach the instructor or TA. In doing so, please make an appointment and prepare in writing, with evidence, why you feel your grade is inappropriate. However, be aware that in requesting a grade reassessment, the entire assignment or examination could be re-evaluated and your grade could go up/down/or stay the same. Note that calculation errors (which do occur!) should be brought to the attention of the GTA immediately. At least 15% of course grades will be posted by the last

day to drop a course.

3. Attendance and Performance in Laboratory: Students are required to work in groups of 4-6. All students are expected to contribute equally to all aspects of each of the laboratory assignments. Failure to exercise and to participate fully in all laboratory (and tutorial) work will impact on the learning experience and performance of not only the student but all other students within the group, and also will impact on the grading of student/group assignments. As a consequence it is important that students attend and participate in each of the laboratory classes (and related lecture). Therefore, attendance will be taken and if no good reason in presented for missing a class, a 2% deduction from the final grade will be assessed for each laboratory class (in whole or in part) missed. Also, student participation will be monitored by the laboratory leader and GTAs and if, throughout the term, you fail to actively participate in laboratory activities, a 5% deduction from the final grade will be assessed.

4. Written documentation: Students who require academic accommodation should provide notification and documentation in advance of due dates, examinations, etc. stating specific reasons and dates. Students must follow-up with their professors and their Academic Counselling office in a timely manner. Documentation for any request for accommodation shall be submitted directly,

4. Ombuds Office - http://www.uwo.ca/ombuds/

Students who are in emotional/mental distress should refer to Mental He.4(l)-1707.0b.0b.0b to M w6ew6R

Laboratory Schedule (2017-2018) (***tentative schedule - subject to change***):

Weeks:	Lab #	Topic
Sept12 - Sept 16	1	Introduction to the PowerLab Data Acquisition System and Measuring Pulmonary Gas Exchange
Sept 19 - Sept 23 Sept 26 - Sept 30 Oct 3 – Oct 7	2	Project Lab #1: Physiological Responses to Incremental Exercise: assessing the Lactate Threshold, Respiratory Compensation Threshold and Maximal O_2 Uptake using different protocols ***(Lab report due - TBA)***
[illegible]		
Oct 10 - Oct 14	3	Mechanical and Exercise Efficiency #1 (note - schedule modified to accommodate university closures and class cancellations: - Mon (Oct 10) - no classes b/c of Thanksgiving Day - Wed & Fri (Oct 12 & 14) – class does Lab #3
Oct 17 - Oct 21 Oct 24 - Oct 28	4	Anaerobic Energy Systems (note - schedule modified to accommodate university closures and class cancellations: - Mon (Oct 17) - complete Lab #3 - Wed, Fri (Oct 19, 21) & Mon (Oct 24) - complete Lab #4 - Wed, Fri (Oct 26, 28) – labs cancelled (Fall Break (Oct 31))
Oct 31 - Nov 4 Nov 7 - Nov 11 Nov 14 – Nov 18	5	Project Lab #2: Critical Power assessing Critical Power and “Anaerobic Work Capacity” (W’) using different protocols ***(Lab report due - TBA)***
[illegible]		
Nov 21 - Nov 25	6	Exercise Intensity and Repayment of the O_2