

McGill University
Department of Kinesiology and Physical Education

PHYSIOLOGY IN SPORT AND EXERCISE
EDKP 391-001

COURSE OUTLINE, Fall 2020

Instructor: Ross Andersen, Ph.D.
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TA :

Office Hours: Wednesday 3:00-4:00PM

Class Schedule: Tuesdays and Thursdays, 1:05-2:25 PM via Zoom

COURSE DESCRIPTION:

This course provides the necessary understanding of the physiological adaptations that occur in the human body, in response to both acute bouts and chronic exercise. Teaching will be re-enforced through “real world” examples and case studies, relating the information delivered in this course to the field of physical education instruction.

COURSE OBJECTIVES:

Upon completion of this course, the student will have:

- a fundamental knowledge and understanding of how the human body responds to both chronic and acute exercise.
- a basic scientific insight to physical function in both normal and pathological conditions and how they are affected by exercise.
- a basic knowledge and appreciation of the scientific terminologies as related to the field.
- an enthusiasm for learning and an appreciation for integrated human exercise physiology!

Regarding the 12 Exit Teaching Competencies required by the Ministère de l'Éducation, du Loisir et du Sport (MELS), this course addresses the following points:

- Competency 1: To act as a professional inheritor, critic and interpreter of knowledge or culture when teaching students.
- Competency 2: To communicate clearly in the language of instruction, both orally and in writing, using correct grammar, in various contexts related to teaching.

REQUIRED COURSE TEXT:

- McArdle, W.D., Katch, F.I., and Katch, V.L. Exercise Physiology - Energy, Nutrition, and Human Performance. Lippincott, Williams & Wilkens, 2014 8th edition.

If you would like to review any supplementary texts, please see the instructor for suggestions.

LECTURE SCHEDULE (subject to change)		
Week	Date	Description
1	September 3 September 8	Introduction to course Chapter 1 : Nutrition
2	September 10 September 15	Chapter 2: Nutrition
3	September 17 September 22	Chapter 3 and 4 Energy for Physical Activity
4	September 24 September 29	Chapter 7: Energy Transfer during Exercise Quiz 1 Chapter 8: Measurement of Human Energy Expenditure
5	October 1 October 6	Chapter 9-11: Energy Expenditure and Capacities
6	October 8 October 13	Chapter 12: Pulmonary Chapter 12: Pulmonary
7	October 15 October 20	Chapter 12-13: Gas exchange and transport Quiz 2
8	October 22 October 27	Chapter 14: Dynamics of Pulmonary ventilation Chapter 15: Cardiovascular System
9	October 29 November 3	Chapter 16: Cardiovascular regulation and integration
10	November 5 November 10	Chapter 17: Functional capacity of the cardiovascular system Quiz 3
11	November 17 November 19 November	Chapter 21: Training for aerobic and anaerobic power
12	November 24 December 26	Chapter 18: Skeletal muscle: structure and function Chapter 22: Training muscles to become stronger
13	December 1 Dec 3	Chapter 23: Special aids to exercise Chapter 28: Body Composition Assessment Final Quiz

***Students are advised to keep a copy of the course syllabus for future reference.**

***All changes in present schedule will be announced prior to date.**

COURSE EVALUATION:

In-class quizzes.....60%
Seminar assignments (4 @10% each).....40%

****Students are responsible for all material covered in lectures ****

Exams may be rescheduled before official university travel or in the event of an emergency. Hospitalization or family death defines an emergency. I must be notified before the exam. In the event of illness, I will require a note from your health care provider which indicates that they are aware that you will miss an exam due to the illness. **In the event of extraordinary circumstances beyond the University's control, the content and/or evaluation scheme in this course is subject to change.**

***It is your responsibility to contact the course instructor ASAP if you will or have missed an in-class examination. If you will or have missed a final exam, you must contact the department for a supplement.**

IMPORTANT DATES AT MCGILL:

Fall Term

- Classes begin Thursday Sept 2 * (except for Dentistry and Medicine students – please see faculty schedules)
- Add/Drop deadline Tuesday, September 15
- Course or University Withdrawal with refund deadline Tuesday, September 22
- **NEW!**Course or University Withdrawal with NO REFUND October 27, 2020
- Classes end Thursday, December 3
- Final Exams begin Friday, December 8
- Final Exams end Thursday, December 22 (11 days, including evening exams)

ACADEMIC STATEMENTS:

In accord with McGill University's Charter of Students' Rights, students in this course have the right to submit in **English** or in **French** any written work that is to be graded. This right applies to all written work that is to be graded, from one-word answers to dissertations. Instructor addition: French/English dictionaries will be permitted during exams (however, supplemental notes marked within the dictionary will not be tolerated, *see following statement of **academic integrity***).

McGill University values **academic integrity**. Therefore all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures (see: www.mcgill.ca/students/srr/honest/ for more information).

L'université McGill attache une haute importance à l'honnêteté académique. Il incombe par conséquent à tous les étudiants de comprendre ce que l'on entend par tricherie, plagiat et autres infractions académiques, ainsi que les conséquences que peuvent avoir de telles actions, selon le Code de conduite de l'étudiant et des procédures disciplinaires (pour de plus amples renseignements, veuillez consulter: www.mcgill.ca/students/srr/honest/).

Instructors who may adopt the use of text-matching software to verify the originality of students' written course work must register for use of the software with Educational Technologies (support.ist@mcgill.ca) and must inform their students before the drop/add deadline, in writing, of the use of text-matching software in a course.

ACADEMIC EXPECTATIONS:

- Check MyCourses for notes prior to attending lecture
- Reading assignments must be completed before attending lecture.
- Revise notes during and after each class.
- ****If you do not understand something, please ask!****
- Requests for supplemental assignments to raise grades will **NOT** be accepted