

McGill University
Department of Kinesiology and Physical Education

PHYSIOLOGY IN SPORT AND EXERCISE
EDKP 391-001

COURSE OUTLINE, Winter 2023

Instructor: Celena Scheede-Bergdahl, Ph.D.
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Office Hours: Please contact instructor by email to arrange for office hours.

Class Schedule: Tuesdays and Thursdays 4:05-5:25, Currie 408

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 13 Exit Teaching Competencies required by the Ministère de l'Éducation et de l'Enseignement supérieur (MEES), this course addresses the following points:

- Competency 2: Master the language of instruction
- Competency 7: Take into account student diversity
- Competency 11: Commit to own professional development and to the profession

REQUIRED COURSE TEXT:

- McArdle, W.D., Katch, F.I., and Katch, V.L. Exercise Physiology - Energy, Nutrition, and Human Performance. Lippincott, Williams & Wilkens, 2010 8th edition.

LECTURE SCHEDULE (subject to change)		
Week	Date	Description
1	1/5	Introduction to course
2	1/10, 12	Chapter 6: Energy transfer in the body
3	1/17, 19	Chapter 7: Energy transfer during exercise
4	1/24, 26	Review In class exam #1
5	1/31, 2/2	Chapter 19: Neural control of human movement Project presentation 1
6	2/7, 9	Chapter 18: Skeletal muscle: structure and function Project presentation 2
7	2/14, 16	Chapter 22: Training muscles to become stronger Project presentation 3
8	2/21, 23	Review In class exam #2
	2/27, 3/1	READING WEEK
9	3/6, 8	Chapter 13: Gas exchange and transport Project presentation 4
10	3/13, 15	Chapter 14: Dynamics of Pulmonary ventilation Project presentation 5
11	3/20, 22	Chapter 16: Cardiovascular regulation and integration Project presentation 6
12	3/27, 29	Chapter 17: Functional capacity of the cardiovascular system Project presentation 7
13	4/3, 5	Chapter 21: Training for aerobic and anaerobic power Project presentation 8
14	4/11	Review class
		Final exam during exam period (April 14-28) exact schedule TBA

***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 examination #1 (during class time, see schedule for date, non-cumulative)	25%
In-class examination #2 (during class time, see schedule for date, non-cumulative)	25%
Group project (details to follow)	15%
Final examination (during exam period, date TBA)	35%

Students are responsible for all material covered in lectures

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 exams department to contact the exams office at <https://www.mcgill.ca/exams/dates/supdefer>

IMPORTANT DATES AT MCGILL:*Winter term*

- **Classes begin:** Wednesday, January 4
- **Winter Reading Break:** from February 27 to March 3 (some exceptions apply)
- **Makeup Days:** Wednesday, April 12 and Thursday, April 13
- **Classes end:** Thursday, April 13
- **Study Days:** Saturday, April 15 and Sunday, April 16
- **Exams begin:** Friday, April 14
- **Exams end:** Friday, April 28 (11 days, including evening exams)

Other important dates built around the Key Academic Dates include:

- **Deadline to cancel registration:** Saturday, December 31, 2022
- **Deadline to register without penalty** (new students only): Wednesday, January 4
- **Add/Drop deadline:** Tuesday, January 17
- **Course or University Withdrawal with refund deadline:** Tuesday, January 24
- **Course or University Withdrawal WITHOUT REFUND deadline:** Tuesday, March 7

ACADEMIC STATEMENTS:

In accord with McGill University's Charter of Students' Rights, students in this course have the right to submit written work in **English** or in **French**. 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/).

COPYRIGHT:

PLEASE NOTE THAT Instructor-generated course materials (e.g., handouts, notes, summaries, exam questions, etc.) are protected by law and may not be copied or distributed in any form or in any medium without explicit permission of the instructor. Note that infringements of copyright can be subject to follow up by the University under the Code of Student Conduct and Disciplinary Procedures. **This means you are not permitted to post ANY course material on external websites.**

EQUITY, DIVERSITY AND INCLUSION:

Professor statement: I absolutely support equity, diversity and inclusion in the academic setting (well, actually, all settings but academic pertains here). Having said that, there is no way that I can know all of your individual experiences and backgrounds but I will try my best. If I have unintentionally offended you, please come and talk to me about it. Education is the best way to solve situations and to ensure that everyone has an opportunity for a safe space during your time at McGill and, specifically, in my classes. Open discussion is how we will improve our understanding of each other... and isn't this what university should be about? Please do not be hesitant to approach me on this topic as I feel very strongly about this. Thank you in advance for your co-operation.

Academic expectations of this class:

- 1) Please read the textbook prior to the class. It will add to the framework of the class slides and provide you with concepts that will be expanded upon or reviewed in class.
- 2) I encourage questions in class.
- 3) If you have any questions or concerns, please be proactive and speak to your instructor(s).
- 4) Requests for supplemental assignments to raise grades will NOT be accepted.
- 5) **Respectful and courteous interactions are expected at all times during this class.**

Please be aware that text-matching software may be used in this course. Item 2 of the text-matching policy states, in part:

Students shall also be informed in writing before the end of the drop/add period (consider this statement as notification) that they are free, without penalty of grade, to choose an alternative way of attesting to the authenticity of their work, if necessary. These include the following:

- a) submitting copies of multiple drafts;
- b) submitting an annotated bibliography;
- c) submitting photocopies of sources;
- d) taking an oral examination directed at issues of originality;
- e) responding in writing to a quiz or questions directed at issues of originality;
- f) providing a written report regarding the process of completing the work; other alternatives devised by the instruction, provided that they are not unduly onerous, that they are meant to attest for authenticity of the written work, and that they meet the approval of the Dean or Disciplinary Officer in the faculty in which the course is offered.

As the instructor of this course, I endeavor to provide an **inclusive learning environment and subscribe to Universal Learning Design as a means to address inclusivity on a whole class basis.** However, if you experience barriers to learning in this course, do not hesitate to discuss them with me and the Office for Student Accessibility & Achievement at 514-398-6009.