

Western University
Faculty of Health Sciences
School of Kinesiology

KIN 4434B - Physiological Function and Physical Activity in Aging

Winter 2022

<p>Instructor: Dr. Anita Christie Office: Arts & Humanities Bldg Rm 3G16 Email: achris95@uwo.ca Phone: 519/661-2111 x80984 Office Hrs: By appointment</p> <p>TAs: Teran Nieman tnieman@uwo.ca Michael Marsala mmarsala@uwo.ca</p>	<p>Lectures: Tuesday 12:30-2:30 Thursday 12:30-1:30</p> <p>Room: SEB 2202 Lectures will be delivered in person. Lectures will not be recorded.</p>
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NOTE: All course information including grades, assignment outlines, deadlines, etc. are available via OWL. Check the website regularly for course announcements.

Calendar Course Description (including prerequisites/anti-requisites):

In this course, we will explore the changes that occur in various physiological systems during the aging process. The impact of these physiological changes on function and health will be discussed. We will examine how factors such as physical activity and can impact the biological changes with advanced age.

Antirequisite(s):

Prerequisite(s): [Kinesiology 2230A/B](#)

Extra Information: 3 lecture hours.

You are responsible for ensuring that you have successfully completed all course pre-requisites, and that you have not taken an anti-requisite course.

Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

NOTE: If you wish to enroll in this course without the stated pre-requisite(s), you must obtain written approval from the course instructor. The approval should then be forwarded to your academic counsellor.

My Course Description

Physiological changes with advanced will be the focus of this class. The function of different physiological systems (e.g. cardiorespiratory, neuromuscular, cognitive) will be discussed, with a focus on relationships among the systems and their contributions to function and health. The impact of factors such as disuse, disease and physical activity on the aging process will be examined to understand best practices for healthy aging.

Learning Outcomes/Schedule:

The goal of this course is to examine the physiological changes with advanced age, with attention to the relationship to physical activity, disuse and disease. Upon completion of this course, students will be able to:

- Compare and contrast the theories and biomarkers of aging
- Understand the psychological changes associated with aging, and explain relationships among changes in different physiological systems
- Describe the impact of physiological changes on cognitive and physical function
- Compare and contrast the role of disease, disuse and physical activity in altering the physiological changes with advanced age
- Articulate strategies to promote healthy aging

WEEK	TOPIC
1	Introduction, Myths and Facts about Aging
2	Theories and biomarkers of aging
3	Stress and hormones
4	Cardiorespiratory function
5	Skeletal system
6	Neuromuscular system
7	Mid-term in class
8	READING WEEK
9	Brain health and cognition
10	Disuse and disease
11	Physical activity benefits and adaptations I
12	Physical activity benefits and adaptations II
13	Course wrap-up and exam review

***Note: This is a tentative list of topics. Timing, order and/or topics may change.**

Required Course Material/Text:

There is no required text book for this course. All required readings will be posted on OWL.

Course Evaluation:

Grade Source	Percentage of Course Grade
Quizzes	5%
Term Assignment	30%
Mid-term Exam	30%
Cumulative Final Exam	35%
Total	100%

Written Exams (65%): 2 exams each designed to be 2 hours in duration. The exam format consists of multiple choice and short answer. Exams will be delivered online. The midterm will be held during class time. **There will be no make-up mid-term exam.** If the midterm is missed and appropriate documentation is provided, the grade will be redistributed to the final exam (i.e. the final exam will be worth 65%). The final exam will be scheduled for 2 hours (date and time to be set by the registrar's office).

Quizzes (5%): Quizzes will be completed through OWL, with a time limit. They will be available from Friday afternoon until Tuesday at midnight on weeks when they are assigned. Quiz dates are listed below. There will be **no make-up quizzes.**

Term Assignment (30%): - Students will choose a topic related to the physiology of aging and write an overview of the physiology and present evidence that supports (or not) the benefits of physical activity in maintaining or improving the specific physiology selected. A minimum of 5 primary, peer-reviewed journal articles is required. The topic must be submitted via OWL by **Friday, February 18th at 11:55 pm** (2% deduction from the paper for failing to submit a topic on time). The paper will be 5 typed pages (double-spaced), excluding references, due by **Friday, March 25th at 11:55 pm** – 30%. No extensions without penalty - 10% deduction per day. Further details will be provided on OWL.

IMPORTANT DATES

Date	Event
Tuesday January 4	First Day of class
Monday January 17	Quiz 1 due by 11:55pm
Monday January 31	Quiz 2 due by 11:55pm
Monday February 7	Quiz 3 due by 11:55pm
Tuesday February 15	Midterm Exam (in class)
Friday February 18	Project topic due by 11:55 pm
February 21-24	Reading Week No Class
Monday March 14	Quiz 4 due by 11:55pm
Monday March 21	Quiz 5 due by 11:55pm
Friday March 25	Term Project due by 11:55 pm
Thursday March 31	Last day of class

Statement of Online Etiquette

In the event that any of the components of this course involve online interactions, to ensure the best experience for both you and your classmates, please honour the following rules of etiquette:

- please “arrive” to class on time
- please use your computer and/or laptop if possible (as opposed to a cell phone or tablet)
- ensure that you are in a private location to protect the confidentiality of discussions in the event that a class discussion deals with sensitive or personal material
- to minimize background noise, kindly mute your microphone for the entire class until you are invited to speak, unless directed otherwise
- please be prepared to turn your video camera off at the instructor’s request if the internet connection becomes unstable
- unless invited by your instructor, do **not** share your screen in the meeting

The course instructor will act as moderator for the class and will deal with any questions from participants. To participate please consider the following:

- if you wish to speak, use the “chat” function and wait for the instructor to acknowledge you before beginning your comment or question
- remember to unmute your microphone and turn on your video camera before speaking
- self-identify when speaking.
- remember to mute your mic and turn off your video camera after speaking (unless directed otherwise)

General considerations of “netiquette”:

- Keep in mind the different cultural and linguistic backgrounds of the students in the course.
- Be courteous toward the instructor, your colleagues, and authors whose work you are discussing.
- Be respectful of the diversity of viewpoints that you will encounter in the class and in your readings. The exchange of diverse ideas and opinions is part of the scholarly environment. “Flaming” is never appropriate.
- Be professional and scholarly in all online postings. Cite the ideas of others appropriately.

Note that disruptive behaviour 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.

Course/University Policies

1. Statement on Use of Personal Response Systems (“Clickers”)

If Personal Response Systems (“Clickers”) are used in the course, a reference to the Guidelines for their use (Guidelines are shown below). Instructors are to communicate clearly to students information on how clickers are used including: how the student’s privacy will be protected, how clickers may be used by the instructor for data gathering and for evaluating the students, and why they cannot be used by anyone but the student (since the students involved in misuse of a clicker may be charged with a scholastic offence).

2. **Academic offences:** They are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site: https://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf

A) Students must write their essays and assignments in their own words. Whenever students take an idea, or a passage from another author, they must acknowledge their debt both by using quotation marks where appropriate and by proper referencing such as footnotes or citations. Plagiarism is a major academic offence (see Scholastic Offence Policy in the Western Academic Calendar). All required papers may be subject to submission for textual similarity review to the

commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between Western University and Turnitin.com <http://www.turnitin.com>

B) Computer marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

3. Electronic Device Usage:

During Exams - Unless you have medical accommodations that require you to do so, or explicit permission from the instructor of the course, you may not use any of the following electronic devices during ANY of the tests, quizzes, midterms, examinations, or other in-class evaluations: cellphones, smart phones, smart watches, smart glasses, audio players or recorders of any sort, video cameras, video games, DVD players, televisions, laptop/notebook/netbook computers, flashlights or laser pointers.

During Lectures and Tutorials: Although you are welcome to use a computer during lecture and tutorial periods, you are expected to use the computer for scholastic purposes only, and refrain from engaging in any activities that may distract other students from learning. Please be respectful to your fellow students and turn the sound off. If the professor receives complaints from other students regarding noise or other disruptive behavior (e.g. watching videos on YouTube.com, updating your Facebook status, playing Solitaire), your classroom privileges will be revoked. From time to time, your professor may ask the class to turn off all computers, to facilitate learning or discussion of the material presented in a particular class. **Unless explicitly noted otherwise, you may not make audio or video recordings of lectures – nor may you edit, re-use, distribute, or re-broadcast any of the material posted to the course website.**

4. Health and Wellness:

Information regarding health and wellness-related services available to students may be found at <http://www.health.uwo.ca/>.

Students who are in emotional/mental distress should refer to Mental Health@Western (<http://www.health.uwo.ca/>) for a complete list of options about how to obtain help.

5. Support Services

There are various support services around campus and these include, but are not limited to:

1. *Student Development Centre* -- <http://www.sdc.uwo.ca/ssd/>
2. *Student Health & Wellness* -- <http://www.health.uwo.ca/>
3. *Registrar's Office* -- <http://www.registrar.uwo.ca/>
4. *Ombudsperson Office* -- <http://www.uwo.ca/ombuds/>

6. Documentation for Academic Accommodation (Illness, Medical/Non-Medical Absences):

http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page_12

Students who experience an extenuating circumstance (illness, injury, or other extenuating circumstance) sufficiently significant to temporarily render them unable to meet academic requirements may submit a request for academic consideration through the following routes:

- (i) Submitting a Self-Reported Absence (see below for conditions)
- (ii) For medical absences exceeding 48 hours, submitting a Student Medical Certificate (SMC) signed by a licensed medical or mental health practitioner to their Academic Counselling in their Faculty of registration in order to be eligible for Academic Consideration; or
- (iii) For non-medical absences exceeding 48 hours, submitting appropriate documentation (e.g., obituary, police report, accident report, court order, etc.) to Academic Counselling in their Faculty of

registration in order to be eligible for academic consideration. Students are encouraged to contact their Academic Counselling unit to clarify what documentation is appropriate. Students seeking academic consideration **must communicate with their instructors no later than 24 hours** after the end of the period covered by either the self-reported absence or SMC, or immediately upon their return following a documented absence.

The following conditions are in place for self-reporting of medical or extenuating circumstances:

- a. a maximum of two self-reported absences between September and April and one self-reported absence between May and August;
- b. any absences in excess of the number designated in clause a above will require students to present a Student Medical Certificate (SMC) or appropriate documentation supporting extenuating circumstances to the Academic Counselling unit in their Faculty of registration no later than two business days after the date specified for resuming responsibilities.
- c. The duration of the excused absence will be for a maximum of 48 hours from the time the Self-Reported Absence form is completed through the online portal, or from 8:30 am the following morning if the form is submitted after 4:30 pm;
- d. The duration of the excused absence will terminate prior to the end of the 48 hour period should the student undertake significant academic responsibilities (write a test, submit a paper) during that time;
- e. The duration of an excused absence will terminate at 8:30 am on the day following the last day of classes each semester regardless of how many days of absence have elapsed;
- f. Self-reported absences will not be allowed for scheduled final examinations; for midterm examinations scheduled during the December examination period; or for final lab examinations scheduled during the final week of term;
- g. Self-reporting may not be used for assessments (e.g. midterm exams, tests, reports, presentations, or essays) worth more than 30% of any given course;

For medical and non-medical absences that are not eligible for self-reporting, Kinesiology students must submit an Academic Consideration Request form found online https://www.uwo.ca/fhs/kin/undergrad/files/accommodation_request.pdf in addition to an SMC or appropriate documentation in the event of a non-medical absence. These documents will be retained in the student's file, and will be held in confidence in accordance with the University's Official Student Record Information Privacy Policy. Health Studies students must contact academic counselling in the School of Health Studies, to make arrangements for accommodations.

7. **Grades:** Where possible assignment objectives and rubrics will be posted on OWL. Should you have a concern regarding the grade you received for an assignment 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. Please be aware that in requesting a grade reassessment, your grade could go up/down/or stay the same. Note that calculations errors (which do occur!) should be brought to my attention immediately.

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

- November 9th, 2019 (for first term half-courses)
- November 27th, 2019 (for full-year courses)
- March 4th, 2020 (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</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. **This practice will not occur here.** The edges of this course are clear and sharp. The mark attained is the mark you achieved and the mark assigned; 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".

8. **Classroom Behaviour:** Class will begin promptly at the time specified at the top of page one of this syllabus. In the event that you must arrive late, please enter the classroom with a minimal disturbance to the class. Please keep all electronic devices on silent and avoid distracting classmates.

9. **Student Code of Conduct**

The purpose of the Code of Student Conduct is to define the general standard of conduct expected of students registered at Western University, provide examples of behaviour that constitutes a breach of this standard of conduct, provide examples of sanctions that may be imposed and set out the disciplinary procedures that the University will follow. For more information, visit <https://www.uwo.ca/univsec/pdf/board/code.pdf>