

Department of Kinesiology and Physical Education, McGill University

EDKP 661 - Current Topics in Kinesiology Research - 2020-2021 (6 credits)

Pre-requisites: EDKP 605 Research Methods; EDPE 676 Intermediate Statistics

Instructor Information:

Name and title: Jenna C. Gibbs, Ph.D.

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Virtual office hours: Contact instructor by email for Zoom appointment

Instructor Message Regarding Remote Delivery:

This course will use both face-to-face and remote delivery for the fall semester. Students will be notified at least one week in advance regarding the location and format for each week's fixed class session. The format for the winter semester will be determined at a later date. The remote learning context presents new challenges for all involved, and student engagement is of particular concern. I have designed this course to consider the challenges that students may be experiencing due to the pandemic and I am committed to providing a supportive learning environment. Please visit the following links related to the remote delivery of this course: [Student-specific Guidelines for Remote Teaching and Learning](#) and [Remote Learning Resources](#). All requests for technical support should be directed to 514-398-3398 or itsupport@mcgill.ca.

Course Schedule & Location:

- **Fall Semester:** Monday, 2:35 – 5:25 pm, via Zoom or Tassone Teaching Laboratory (CURRIE 304)
- **Winter Semester:** Monday, 8:35 – 11:25 am, TBD

Note: Any fixed class sessions will occur during the scheduled class time. In general, we will be meeting on Zoom or in-person during each scheduled class time. Students will receive at least one week notice and instructions regarding the location and format for each week's fixed class session.

Course Overview:

Lecture and seminar-based discussions of current research across sub-disciplines and areas relevant to Kinesiology. Students will situate their specific areas of doctoral research within the broader multidisciplinary field of Kinesiology and other health-related research disciplines. Taught by experts in sub-disciplines of Kinesiology research (e.g. exercise physiology, biomechanics, motor control, physical and health education pedagogy, sport and exercise psychology) and in interdisciplinary health research. Through individual and group work, students will be expected to develop a breadth and foundation of knowledge in Kinesiology, its evolution, and future directions of the field.

Learning Outcomes:

By the end of this course, students will be able to:

1. Develop an understanding of the scope of Kinesiology from the current scientific literature.
2. Identify current and future research trends in Kinesiology.
3. Develop research paradigms targeting specific topics relevant to physical activity and health from a variety of Kinesiology sub-disciplines.

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4. Develop research paradigms that address specific topics relevant to physical activity and health using interdisciplinary research approaches with other scientific specialties.
5. Design knowledge translation plans to effectively communicate Kinesiology research to a variety of end-users (e.g., researchers, community members, educators, patients, health care providers).

Instructional Method:

One fixed class session per week. Course activities will vary to include live lectures (Zoom and face-to-face), short presentation videos, guest lectures (Zoom and face-to-face), assigned readings, group discussions, journal clubs, oral presentations, expert panels, case studies, and peer review activities.

Note: Please review the course schedule closely for a detailed description of the fixed (students participate together online at the same time) and flexible activities and assignments (students participate online at the time of their choosing but there is a due date).

Expectations for Student Participation:

Students will be expected to use Zoom and myCourses to participate in the course on a regular basis. Please find relevant instructions and tutorials for these technologies at McGill's [Remote Learning Resources](#). Participation will be assessed through your preparedness for and participation in discussions about the course content and assigned readings during class and on myCourses, active participation in peer review activities (including the grant review panel), and contributions to question and answer sessions with guest speakers and expert panels. Students are expected to prepare for these sessions by reviewing the assigned readings and course materials before the fixed sessions. For students unable to attend these fixed class sessions, you can still engage in the course by reviewing the presentation slides and assigned readings on myCourses and participating in the myCourses discussion forums and/or surveys as directed.

Recording of Sessions:

All fixed class sessions will be recorded to accommodate students who are unable to participate in those sessions for reasons such as time zones, bandwidth, and caregiver responsibilities. These recordings will be made available to students through myCourses, which limits access to students registered in the course. Students will be informed in all instances that they will be recorded. Please read the Guidelines on Remote Teaching and Learning: <https://www.mcgill.ca/tls/instructors/class-disruption/strategies/guidelines-remote> and the course outline for this course on myCourses. You will be notified through a 'pop-up' box in Zoom if a lecture or portion of a class is being recorded. By remaining in sessions that are recorded, you agree to the recording, and you understand that your image, voice, and name may be disclosed to classmates. You also understand that recordings will be made available in myCourses to students registered in the course.

Required Course Materials:

- a) Course notes on myCourses
- b) Zoom lecture recordings on myCourses
- c) Assigned readings from the scientific literature on myCourses
- d) Additional readings, videos, and resources on myCourses
- e) Device for accessing Zoom (computer, tablet, smartphone) with optional use of a webcam and microphone

Course Content

Course topics are listed on the course schedule. Course materials (slides, assignment instructions) will be available on myCourses the day prior to the fixed class sessions for which they will be presented and the Zoom recordings will be available soon after the fixed class session. In certain instances, students will be expected to review assigned readings, participate in peer review activities, and submit questions for guest speakers and expert panels prior to fixed classes and they will be reminded of these instances at least one week in advance (see Course Schedule). Students are encouraged to review the course notes, recordings, and assigned/optional readings directly following the fixed session to help prepare for assignments, clarify content, and reinforce their understanding.

Course Evaluation:

Students will be assessed using a variety of means (oral, written, individual, group) and will be expected to demonstrate doctoral-level learning and critical assessment capabilities.

Grading Scheme:

| Name of Assignment | Due Date | % of Final Grade |
|--|--|-------------------------|
| <i>Fall Semester</i> | | |
| Oral presentation: current & future trends | <i>See Course Schedule and myCourses</i> | 15% |
| Research proposal critique #1 | Nov. 20 at 11:59 PM on myCourses | 10% |
| Research proposal #1 | Dec. 7 at 11:59 PM on myCourses | 20% |
| Participation | <i>See Course Schedule and myCourses</i> | 5% |
| <i>Winter Semester</i> | | |
| Research proposal critique #2 | Mar. 15 at 11:59 PM on myCourses | 10% |
| Oral presentation: proposal #2 | Mar. 29 at 11:59 PM on myCourses | 15% |
| Research proposal #2 | Apr. 12 at 11:59 PM on myCourses | 20% |
| Participation | <i>See Course Schedule and myCourses</i> | 5% |

Note: In the event of extraordinary circumstances beyond the University’s control, the course content and/or evaluation scheme is subject to change.

Assignment Descriptions:

- ***Oral presentation on current & future trends in Kinesiology:*** An oral presentation will be given by students individually in the Fall semester following the associated lectures and assigned readings with the objective to critically analyze a current trend in Kinesiology research. Students will explain the origins of this trend, describe its current state of evidence, highlight potential impact and risks that it will pose to the future of science, and reflect on how their research will follow or oppose this trend. Special accommodation may be granted by the instructor in exceptional circumstances which include illness, participation in athletic/academic events (varsity, national, international), domestic affliction, and religious holidays. It is the student’s responsibility to supply proper documentation and/or notification at least two weeks prior to the presentation due date to support their circumstance. Personal travel plans and arrangements are not valid reasons for requesting a special accommodation for an assignment.
- ***Written research proposals:*** Students will prepare two written proposals and two critiques of their peers’ written proposals. Each assignment must be submitted on myCourse by the designated due date (see Course Schedule). Late assignments can be handed in on myCourses, and the date and

time at which the assignment was submitted will be recorded. Late assignments will be penalized 10% for each day or part of a day that they are late. Special accommodation may be granted by the instructor if the previously mentioned exceptional circumstances apply. It is the student's responsibility to supply proper documentation and/or notification at least one month prior to the assignment due date to support their circumstance.

- Proposal #1 (intra-disciplinary), to be submitted individually at the end of the Fall semester. Students will briefly present a literature review, a rationale, a set of objectives and hypotheses, research methods, and expected outcomes corresponding to a research project that would be conducted using the perspective of Kinesiology research (i.e. using one or more research approaches presented in the course). The goal of proposal #1 is to encourage the student to develop a research idea that can serve as the basis for their PhD thesis.
- Proposal #2 (interdisciplinary), to be submitted as a small group at the end of the Winter semester. A group of 2-3 students from different sub-disciplines of Kinesiology will submit a collective interdisciplinary research proposal drawing from Kinesiology or a relevant health research field. Groups will have to integrate at least two disciplines to develop a research question, present relevant methods, and outline interdisciplinary expected outcomes. The groups will also need to demonstrate the added value of each discipline's contribution to the research protocol. In addition, sex- and gender-based research approaches and a knowledge translation plan must be incorporated into the proposal.
- Critique of written proposals will be conducted by students, individually for proposal #1 and as a group for proposal #2. Students will provide feedback to their peers in similar fields of research for proposal #1 and within the larger breadth of their research for proposal #2. The goal of these critiques is to provide an opportunity for students to critically evaluate their peers' work and provide constructive feedback to improve the end-product. The content and quality of the peer review will be assessed along with the specific comments provided to improve the original proposals.
- **Group oral research presentation:** A group oral presentation will be given by students in small groups in the Winter semester and will parallel the objectives of the written research proposal #2 as an opportunity to showcase and receive feedback on each group's project. The oral presentations will be given in the form of a powerpoint presentation during fixed class time on March 29 (location and format to be determined at a later date). Special accommodation may be granted by the instructor if the previously mentioned exceptional circumstances apply to 1 or more groups members and the group will be expected to provide proper documentation and notification at least one month prior to the presentation due date.
- **Participation:** Students will be evaluated for participation throughout the course, which will be worth 10% of the final grade (5% per semester). The participation grade will include: reflections on research presentations, preparedness for and participation in discussions about the course content and assigned readings during the fixed class session and on myCourses, active participation in peer review activities (including grant review panel), and contributions to question

and answer sessions with expert panels and guest speakers. The purpose of participation in the course is to enhance engagement, discuss content with the instructor, guest speakers, and other students, and reinforce understanding of concepts. For students unable to attend these fixed class sessions, you can still engage in the course by reviewing the presentation slides and assigned readings on myCourses and participating in the myCourses discussion forums and/or surveys as directed. Students are permitted to miss/not participate in up to two fixed class sessions per semester without penalty.

Student Assessment Policy: The [University Student Assessment Policy](#) exists to ensure fair and equitable academic assessment for all students and to protect students from excessive workloads. All students and instructors are encouraged to review this Policy, which addresses multiple aspects and methods of student assessment (e.g. timing of assignment due dates).

Course Communication: Students requiring assistance are encouraged to email any course-related questions to their instructor. While email is commonly used by students to communicate with their instructor, it does limit the effectiveness and efficiency of the communications and may not be the best way for the instructor to answer student questions, especially those requiring an explanation of course concepts or personal concerns. Should you wish to meet with the instructor outside of the fixed class time, please email them to make an appointment to be held on Zoom (or MS Teams if preferred). Students will have the option to access the appointment via the Zoom link or call in by phone. To protect your privacy, the instructor will only reply to you at your official McGill email address. Please be sure to check your McGill email account on a regular basis.

Special Notes:

McGill University Policy on Academic Conduct: 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 [McGill's guide to academic honesty](#) 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 le [guide pour l'honnêteté académique de McGill](#)). Additional policies governing academic issues which affect students can be found in the McGill Charter of Students' Rights (see [document](#)).

Language of Submission: 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 does not apply to courses in which acquiring proficiency in a language is one of the objectives. Conformément à la Charte des droits de l'étudiant de l'Université McGill, chaque étudiant a le droit de soumettre en français ou en anglais tout travail écrit devant être noté (sauf dans le cas des cours dont l'un des objets est la maîtrise d'une langue).

Copyright Policy for Course Materials: Instructor generated course materials (e.g., lecture notes and recordings, quiz questions, videos 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.

Special Circumstances: The instructor of this course endeavours to provide an inclusive learning environment. However, if you experience barriers to learning in this course, do not hesitate to discuss them with your instructor and the [Office for Students with Disabilities](#), 514-398-6009.

End-of-Course Evaluations: End-of-course evaluations are one of the ways that McGill works towards maintaining and improving the quality of courses and the student's learning experience. You will be notified by email when the evaluations are available. Please note that a minimum number of responses must be received for results to be available to students.

Land Acknowledgement: McGill University is on land which has long served as a site of meeting and exchange amongst Indigenous peoples, including the Haudenosaunee and Anishinabeg nations. We acknowledge and thank the diverse Indigenous people whose footsteps have marked this territory on which peoples of the world now gather. L'Université McGill est sur un emplacement qui a longtemps servi de lieu de rencontre et d'échange entre les peuples autochtones, y compris les nations Haudenosaunee et Anishinabeg. Nous reconnaissons et remercions les divers peuples autochtones dont les pas ont marqué ce territoire sur lequel les peuples du monde entier se réunissent maintenant.

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Course Schedule

This course schedule, along with fixed class sessions, course materials, and assignment due dates, are subject to change. It is the student's responsibility to check myCourses for corrections or updates to the outline. Any course changes will be clearly noted through myCourses announcements or McGill e-mail. Presentation slides, and assignment instructions will be available on myCourses the day prior to the fixed class sessions for which they will be presented and the Zoom recordings will be available soon after the fixed class session. Note: Currently scheduled in-person classes involving face-to-face teaching for the fall semester are indicated on the course schedule (please review directives for in-person teaching activities on myCourses). Students will be notified at least one week in advance regarding the location and format for each week's fixed class session.

FALL SEMESTER: Intra-Disciplinary Aspects in Kinesiology Research

| Week | Date | Fixed Class Description | Course Materials and/or Recordings | Assignments Due |
|-------------|-------------|--|---|---|
| 1 | Sept. 14 | Course Introduction – Fall Semester (In-Person): <ul style="list-style-type: none"> The disciplinary field of Kinesiology: What is it? Past and present Course outline summary | <ul style="list-style-type: none"> Review course outline on myCourses before class | None |
| 2 | Sept. 21 | Designing & Evaluating Research Proposals (In-Person): <ul style="list-style-type: none"> Designing and evaluating research proposals across the subdisciplines of kinesiology Kinesiology trends assignment summary | <ul style="list-style-type: none"> Review proposal #1 and trends assignments on myCourses before class | None |
| 3 | Sept. 28 | Kinesiology & Exercise Metabolism (TBD): <ul style="list-style-type: none"> Nutritional and contractile regulation of protein turnover (Prof. Tyler Churchward-Venne) Intradisciplinary proposal workshop #1 | <ul style="list-style-type: none"> Be prepared to discuss assigned readings Submit 2 questions for Prof. Churchward-Venne by 9 AM | None |
| 4 | Oct. 5 | Kinesiology & Musculoskeletal Health (TBD): <ul style="list-style-type: none"> Optimizing bone strength in musculoskeletal health and disease (Prof. Jenna Gibbs) <i>Kinesiology trends oral presentations</i> | <ul style="list-style-type: none"> Be prepared to discuss assigned readings Submit 2 questions for Prof. Gibbs by 9 AM | None |
| 5 | Oct. 12 | Thanksgiving – No Class | None | None |
| 6 | Oct. 19 | Kinesiology & Integrative Physiology (TBD): <ul style="list-style-type: none"> Polycystic ovary syndrome: Impact on cardiovascular health and exercise as a potential treatment (Prof. Charlotte Usselman) <i>Kinesiology trends oral presentations</i> | <ul style="list-style-type: none"> Be prepared to discuss assigned readings Submit 2 questions for Prof. Usselman by 9 AM | <u>Proposal #1 Topic Due by 11:59 PM</u> |

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| 7 | Oct. 26 | Kinesiology & Clinical Exercise Physiology (TBD): <ul style="list-style-type: none"> • What resting tests of human physiology conceal, cardiopulmonary exercise tests reveal (Prof. Dennis Jensen) • Intradisciplinary proposal workshop #2 | <ul style="list-style-type: none"> • Be prepared to discuss assigned readings • Submit 2 questions for Prof. Jensen by 9 AM | None |
| 8 | Nov. 2 | Kinesiology & Sport/Exercise Psychology (TBD): <ul style="list-style-type: none"> • Exercise psychology topic TBD (Prof. Lindsay Duncan) • <i>Kinesiology trends oral presentations</i> | <ul style="list-style-type: none"> • Be prepared to discuss assigned readings • Submit 2 questions for Prof. Duncan by 9 AM | None |
| 9 | Nov. 9 | Kinesiology & Adapted Physical Activity (Zoom): <ul style="list-style-type: none"> • Physical activity programming for individuals with disabilities (Prof. Meredith Rocchi) • <i>Kinesiology trends oral presentations</i> | <ul style="list-style-type: none"> • Be prepared to discuss assigned readings • Submit 2 questions for Prof. Rocchi by 9 AM | <u>Proposal #1 Draft Due by 11:59 PM</u> |
| 10 | Nov. 16 | Kinesiology & Biomechanics (TBD): <ul style="list-style-type: none"> • Wearable technologies: From lab to real world analysis of human movement (Prof. David Pearsall) • <i>Kinesiology trends oral presentations</i> | <ul style="list-style-type: none"> • Be prepared to discuss assigned readings • Submit 2 questions for Prof. Pearsall by 9 AM | None |
| | Nov. 20 | None | None | <u>Proposal #1 Critique Due by 11:59 PM</u> |
| 11 | Nov. 23 | Kinesiology & Motor Control (TBD): <ul style="list-style-type: none"> • Genetics & epigenetics of motor development (Prof. Benoit Gentil) • Intradisciplinary proposal workshop #3 | <ul style="list-style-type: none"> • Be prepared to discuss assigned readings • Submit 2 questions for Prof. Gentil by 9 AM | None |
| 12 | Nov. 30 | Kinesiology & Physical Education Pedagogy (TBD): <ul style="list-style-type: none"> • Cultural politics of sport-for-development programming (Prof. Jordan Koch) • <i>Kinesiology trends oral presentations</i> | <ul style="list-style-type: none"> • Be prepared to discuss assigned readings • Submit 2 questions for Prof. Koch by 9 AM | None |
| | Thurs. Dec. 3* | Extra Class Session (Zoom): <ul style="list-style-type: none"> • Proposal #1 Q&A session | None | None |
| 13 | Dec. 7 | Course Wrap-Up (In-Person): <ul style="list-style-type: none"> • Future directions of Kinesiology: What have we learned? What don't we know? | None | <u>Proposal #1 Final Version Due by 11:59 PM</u> |

WINTER SEMESTER: Inter-Disciplinary Aspects of Kinesiology Research

| Week | Date | Fixed Class Description | Course Materials and/or Recordings | Assignments Due |
|-------------|-------------|--|---|---|
| 1 | Jan. 4 | Course Introduction – Winter Semester: <ul style="list-style-type: none"> Working with other disciplines: What is interdisciplinary research? | <ul style="list-style-type: none"> Review course outline and proposal #2 assignment | None |
| 2 | Jan. 11 | Interdisciplinary Kinesiology Research – Biomedical: <ul style="list-style-type: none"> Working with other disciplines to advance biomedical research (TBD) | <ul style="list-style-type: none"> Be prepared to discuss assigned readings Submit 2 questions for guest speaker(s) | None |
| 3 | Jan. 18 | Working with Kinesiology researchers – Biomedical: <ul style="list-style-type: none"> Panel of experts composed of collaborators of KPE members in fields related to medicine and physiology. <i>Panelists: TBD</i> | <ul style="list-style-type: none"> Submit 2 questions for panel | None |
| 4 | Jan. 25 | Interdisciplinary Kinesiology Research – Health: <ul style="list-style-type: none"> Working with other disciplines to advance health research (TBD) | <ul style="list-style-type: none"> Be prepared to discuss assigned readings Submit 2 questions for guest speaker(s) | <u>Proposal #2 Topic Due by 11:59 PM</u> |
| 5 | Feb. 1 | Working with Kinesiology researchers – Health: <ul style="list-style-type: none"> Panel of experts composed of collaborators of KPE members in fields related to allied health fields. <i>Panelists: TBD</i> | <ul style="list-style-type: none"> Submit 2 questions for panel | None |
| 6 | Feb. 8 | Interdisciplinary Kinesiology Research – Social Sciences: <ul style="list-style-type: none"> Working with other disciplines to advance social sciences research (TBD) | <ul style="list-style-type: none"> Be prepared to discuss assigned readings Submit 2 questions for guest speaker(s) | None |
| 7 | Feb. 15 | Working with Kinesiology Researchers – Social Sciences: <ul style="list-style-type: none"> Panel of experts composed of collaborators of KPE members in the social sciences (e.g., education, business, psychology). <i>Panelists: TBD</i> | <ul style="list-style-type: none"> Submit 2 questions for panel | None |
| 8 | Feb. 22 | Sex and Gender-Based Research Approaches: <ul style="list-style-type: none"> Examining sex- (biological) and gender-based (socio-cultural) factors in Kinesiology research (TBD) | <ul style="list-style-type: none"> Be prepared to discuss assigned readings Submit 2 questions for guest speaker(s) | |
| | Feb. 26 | None | None | <u>Proposal #2 Draft Due by 11:59 PM</u> |

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| | Mar. 1 | No Class – Reading Week | None | None |
| 9 | Mar. 8 | Grant Review Panel Activity: <ul style="list-style-type: none"> Peer review of proposal #2 using a mock grant review panel format | <ul style="list-style-type: none"> Review grant review panel instructions | None |
| 10 | Mar. 15 | End-User/Patient Engagement: How can end-users inform Kinesiology research? | <ul style="list-style-type: none"> Be prepared to discuss assigned readings | <u>Proposal #2 Critique Due by 11:59 PM</u> |
| 11 | Mar. 22 | Beyond Research: <ul style="list-style-type: none"> Developing an effective knowledge translation plan | <ul style="list-style-type: none"> Be prepared to discuss assigned readings | None |
| 12 | Mar. 29 | Group Presentation Showcase: <ul style="list-style-type: none"> Group oral presentations on interdisciplinary projects/proposal #2 | None | <u>Group Presentations Due In-Class</u> |
| | Apr. 5 | No Class – Easter Monday | None | None |
| 13 | Apr. 12 | Recapping Interdisciplinary Research: <ul style="list-style-type: none"> A discussion on how the past series of lectures advance Kinesiology research? | None | <u>Proposal #2 Final Version Due by 11:59 PM</u> |