



McGill

New Program/Major or Minor/Concentration Proposal Form

(07/2004)

1.0 Degree Title

Please specify the two degrees for concurrent degree programs

2.0 Administering Faculty/Unit

1.1 Major (Legacy= Subject)(30-char. max.)

Offering Faculty/Department

**1.2 Concentration (Legacy = Concentration/Option)
If applicable to Majors only (30 char. max.)**

**3.0 Effective Term of Implementation
(Ex. Sept. 2004 = 200409)
Term**

1.3 Minor (with Concentration, if Applicable) (30 char. max.)

4.0 Rationale for new proposal

Since the early 2000's, McGill has graduated more than 20 Ph.D. students enrolled in Kinesiology (i.e., science of human movement) research in the Department of Kinesiology and Physical Education (KPE) using the Ad hoc option. KPE currently has 20 registered Ph.D. students. Given KPE's sustained success in recruiting and graduating Ph.D. students and in supporting them using their successful research programs, there is a need to formalize this offering into a structured program that complies with the Quebec Ministry's expectations of University Ph.D. programs. This Ph.D. in Kinesiology Sciences will only be the third such Ph.D. program in Quebec, and the only one offered in English, and would further attract students from Canada and the world to McGill University. The academic purpose of this Ph.D. program is to advance the science of human movement aimed to promote health and well-being across the lifespan by actively engaging Ph.D. students in kinesiology-related research. Admission requirements will be a Master's degree in Kinesiology or related disciplines, or equivalent.

5.0 Program Information

Please check appropriate box(es)

5.1 Program Type

Bachelor's Program
 Master's
 M.Sc. (Applied) Program
 Dual Degree/Concurrent Program
 Certificate
 Diploma
 Graduate Certificate
 Graduate Diploma
 Ph.D. Program
 Doctorate Program
 (Other than Ph.D.)
 Private Program
 Off-Campus Program
 Distance Education Program
 (By Correspondence)
 Other (Please specify)

5.2 Category

Faculty Program (FP)
 Major
 Joint Major
 Major Concentration (CON)
 Minor
 Minor Concentration (CON)
 Honours (HON)
 Joint Honours Component (HC)
 Internship/Co-op
 Thesis (T)
 Non-Thesis (N)
 Other
 Please specify

5.3 Level

Undergraduate
 Dentistry/Law/Medicine
 Continuing Ed (Non-Credit)
 Collegial
 Masters & Grad Dips & Certs
 Doctorate
 Post-Graduate Medicine/Dentistry
 Graduate Qualifying
 Postdoctoral Fellows

6.0 Total Credits

7.0 Consultation with

Related Units	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Financial Consult	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Attach list of consultations.

8.0 Program Description (Maximum 150 words)

The objective of the Ph.D. in Kinesiology Sciences is to provide opportunities for in-depth research experience in (an) area(s) of Departmental expertise within the breath of kinesiology research. The program will provide graduate research training in kinesiology-related areas such as exercise physiology, biomechanics, motor control, physical and health education pedagogy, and sport, exercise and health psychology provided by a rich environment in the Department of Kinesiology and Physical Education. Students with a Master's degree in kinesiology or related discipline or equivalent background will qualify to apply. Students will complete 12 credits of required courses, including a capstone course intended to survey contemporary issues in kinesiology research, and two complementary courses intended to provide adequate theoretical depth to support their program of research. Courses will all be classroom or lab-based, offered on the McGill campus.

NOTE: This program does not lead to Certification as a practicing kinesiologist

9.0 List of proposed program for the New Program/Major or Minor/Concentration.

If new concentration (option) of existing Major/Minor (program), please attach a program layout (list of all courses) of existing Major/Minor.

Proposed program (list courses as follows: Subj Code/Crse Num, Title, Credit weight under the headings of: Required Courses, Complementary Courses, Elective Courses)

Proposed Ph.D. in Kinesiology Sciences (0 credits)**Required Courses (12 cr)**

EDKP 605 Research Methods 1 (3 cr)
 EDPE 676 Intermediate Statistics (3 cr)
 EDKP 617 Seminar in Kinesiology and Physical Education 1 (0 cr)
 EDKP 618 Seminar in Kinesiology and Physical Education 2 (0 cr)
 EDKP 619 Seminar in Kinesiology and Physical Education 3 (0 cr)
 EDKP 620 Seminar in Kinesiology and Physical Education 4 (0 cr)
EDKP 661D1 Current Topics in Kinesiology Research (3 cr)
EDKP 661D2 Current Topics in Kinesiology Research (3 cr)
 EDKP 701 Ph.D. Comprehensive Examination (0 cr)

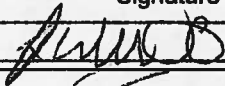
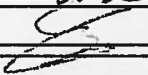
Complementary Courses (6 cr)

A minimum of 6 credits from the following; other courses on these topics from the Faculty of Education or other Faculties may be selected subject to approval of program advisor.

EDKP 603D1 Individual Reading Course 1 (3 cr)
 EDKP 603D2 Individual Reading Course 1 (3 cr)
 EDKP 616 Individual Reading Course 2 (3 cr)
 EDKP 630 Human Walking Mechanics (3 cr)
 EDKP 635 Modeling Human Movement (3 cr)
 EDKP 640 Advanced Ergonomics (3 cr)
 EDKP 650 Research in Physical Education Pedagogy (3 cr)
 EDKP 652 Cardio-Respiratory Exercise Physiology (3 cr)
 EDKP 654 Sport Psychology (3 cr)
 EDKP 655 Inclusive Physical Activity (3 cr)
 EDKP 662 Nerve/Muscle Exercise Response (3 cr)
 EDKP 664 Motor Learning (3 cr)
 EDKP 665 Motor Behaviour and Disability (3 cr)
 EDKP 671 Experimental Problems (3 cr)
 EDKP 672D1 Experimental Problems (3 cr)
 EDKP 672D2 Experimental Problems (3 cr)

P113.KPE

10.0 Approvals

Routing Sequence	Name	Signature	Date
Department	Prof Julie Côté		Jan. 19, 2017
Curric/Acad Committee	Prof Elizabeth Wood		Jan 24, 2017
Faculty 1			
Faculty 2			
Faculty 3			
CGPS			
SCTP			
APC			
Senate			

Submitted by

Name

Phone

Email

Submission Date

To be completed by ARR:

CIP Code

Montréal, 12 janvier 2017

Julie Côté, Ph.D.
Directrice et Professeure Agrégée
Département de Kinésioles et d'Éducation Physique
Université McGill
475 avenue des Pins ouest, Montréal, QC, H2W 1S4

Chère Professeure Côté,

Par la présente, la Fédération des Kinésioles du Québec (FKQ) désire apporter son appui enthousiaste à la demande de nouveau programme de doctorat en sciences de la kinésioles déposée par l'Université McGill.

La FKQ est un organisme sans but lucratif, regroupant plus de 1200 membres, dont près de 1000 kinésioles accrédités.

En 2013, la FKQ a déposé une demande de constitution en ordre professionnel à l'Office des professions du Québec, à laquelle les représentants de l'Université McGill ont activement contribué. De par cette demande, nous espérons qu'à l'instar de l'Ontario, le statut professionnel des kinésioles, leur domaine et leurs activités professionnelles soit reconnus au Québec, ce qui contribuerait à l'essor de notre profession au Québec.

Actuellement, il existe deux programmes francophones de doctorat en sciences de la kinésioles au Québec, soit à l'Université de Montréal et à l'Université Laval. Bien que l'accréditation à la FKQ ne requière actuellement pas de diplôme d'études supérieures, les avancées de recherches en sciences de la kinésioles représentent un élément important au développement de notre profession. La formalisation de ce programme de doctorat à l'Université McGill ne pourrait que davantage favoriser les liens entre la FKQ et l'Université McGill, contribuer à la construction de savoirs et de compétences en kinésioles et ultimement optimiser l'impact de la kinésioles sur la santé des Québécois.

Par conséquent, la FKQ désire appuyer la demande de nouveau programme de doctorat en sciences de la kinésioles déposée par l'Université McGill.

En vous souhaitant un bon succès, je vous prie d'agréer mes salutations distinguées,



Valérie Lucia
Directrice générale

McGill Ph.D. in Kinesiology Sciences, New Ph.D. Program Framework Document

Section A: Rationale for the Proposed Program

1. Evolution of the discipline – brief history of the field and where it's headed. How the new Ph.D. program fits within the discipline

As a discipline, kinesiology (i.e. study of human movement) has its roots in physical education and health promotion, both of which have a rich history at McGill University since the luminaries Tait Mackenzie, James Naismith, Ethel Mary Cartwright and Sir Arthur Currie were students and professors at McGill. In the 1960s, the physical education teacher-training model that grounded many physical education departments received increasing research attention. In 1967, the University of Waterloo and Simon Fraser University established their Departments of Kinesiology, the two first in North America to offer education in exercise sciences. The 1996 “Physical Activity and Health” report by the Acting Surgeon General of the United States, in collaboration with over 200 American and Canadian exercise scientists, stressed the important role of physical activity in optimizing health. The report provided impetus for universities to ensure appropriate training for individuals to assess, design and monitor physical activity across the lifespan. The report also recognized the science of kinesiology as a complex and developing field, contributing strong evidence to the interaction between physical activity and health, and stressed the need for continued research in this discipline. Thus, since the late 1990s, most universities in Canada have created their own academic kinesiology program, with various health and/or performance perspectives aligned with each institution’s specific expertise (e.g. human performance in the workplace, high performance sport, clinical interventions, recreation and activities of daily living). Some institutions have maintained the historical link between physical education and kinesiology by offering both programs within the same Faculty (University of Toronto) or Department (McGill), while others have separated both fields in separate departments (U. Laval).

Professional bodies exemplify the evolution of the discipline of kinesiology as they now encompass both a body of knowledge and an associated client-centered practice. The primary mission of these organizations is to promote population health through various intervention strategies emphasizing physical activity and to set standards of practice for their members. In the US, the American College of Sports Medicine (ACSM) represents 50,000 practicing exercise specialists (the U.S. equivalent to kinesiologists). In 2013, Ontario was the first Canadian province to request and obtain professional status for practicing kinesiologists. According to Ontario law, specific professional acts such as prescribing exercise programs are now to be performed by certified, licensed kinesiologists. A similar request was submitted to the *Office des Professions du Québec* in 2014 by the La Fédération des Kinésiologues du Québec (FKQ), supported by a provincial committee of university kinesiology representatives, including McGill University. Although the objective of post-graduate kinesiology programs is not to prepare students to qualify for this certification, these graduate programs create a strong knowledge base of effective best practices used by kinesiologists. These best practices must be based on sound knowledge foundations and be able to evolve in breadth and depth from ground-breaking research, in a way that is open to other disciplines and to the world.

To meet these needs, Ph.D. programs in Kinesiology have emerged in Canada in the last decades, but only two such programs currently exist in the province of Quebec (Université de Montréal, Université Laval, both delivered in French). *Although the McGill Ph.D. in Kinesiology Sciences would be a new program, our Department has been graduating Ph.D. students for more than 20 years (first graduate on record dating back to 1988).* To do so, our Department has been using the *Ad hoc* Ph.D. option, which has been used to individually customize students' program according to their dissertation topic. In the late 1990s, this option was exercised only sporadically, but we have had Ph.D. student cohorts registered in our Department on a continuous basis since the mid 2000's (see Table 1), with graduates going on to Faculty positions in institutions as prestigious as Columbia University. This corresponded to a period for our Department of only marginal growth of our full-time faculty complement (which has traditionally oscillated around 15) but of significant expansion of research productivity, in line with the general development of the discipline of kinesiology worldwide (see previously).

Academic year	New admits	Total enrolment	Degrees granted	Full-time Tenure Track (eligible supervisors)
2005/6	2	2	NA	12
2006/7	1	3	NA	12
2007/8	4	8	0	12
2008/9	4	12	0	14
2009/10	3	15	0	14
2010/11	8	21	2	16
2011/12	3	20	4	15
2012/13	4	21	3	14
2013/14	3	20	4	15
2014/15	4	19	5	14
2015/16	3	16	6	14
2016/17	(5)	(20)	(4)	13

Table 1: Ad hoc Ph.D. admissions, enrolment and graduation statistics for students enrolled in McGill's Department of Kinesiology and Physical Education. *note: fragmented information is available for the years prior to 2006; preliminary data available for 2016/17.

In 2007, at a point where KPE began to show evidence for a sustainable Ph.D. cohort size, a decision was made by McGill to explore the creation of an Interdisciplinary Allied Health Ph.D. program, with a goal of uniting cohorts of different McGill academic units including our Department into one Ph.D. program. *However, in 2014, this plan was abandoned as it was not seen as a feasible solution for Ph.D. studies. In parallel, during this period, our Ph.D. enrolment numbers were maintained and we began consistently graduating Ph.D. candidates.*

To this day, McGill's KPE is rated among the top 3 most research-intensive Kinesiology program-delivering Departments (in terms of research funding per professor), according to a cyclical review of our Department produced in 2015. This provides evidence of the ability of our Department to adequately support Ph.D. student cohorts with quality research training environments and sizeable trainee stipend support. *As a department, we now feel well equipped to request a formal Ph.D. program in Kinesiology Sciences. This new program would be the only one in Quebec delivered in English, representing a unique market to attract Canadian and international students interested in the emerging field of Kinesiology Sciences.*

2. Definition of proposed body of knowledge – what skills and understanding will students in the program gain? In what key research areas?

The mission of McGill's Department of Kinesiology and Physical Education (KPE) is to train leaders of tomorrow through excellence in teaching, research and service and to advance and translate knowledge about sport, physical activity and human health across the lifespan, through a transdisciplinary focus from the cell, to the individual and to society. With the proposed new Ph.D. program, we aim to train critical thinkers, using state-of-the-art kinesiology research methods and statistical approaches, who will make significant original contributions to the advancement of kinesiology sciences. In regards to the scope of training, the contribution of our research programs falls within three domains, that are aligned with the Canadian Tri-Council granting agencies: *Health Sciences, Natural Sciences and Engineering, and Social Sciences and Humanities*. In fact, all three research pillars contribute almost equally to the scope of kinesiology research in KPE, as evidenced by a nearly balanced track record of research funding in KPE from each Tri-Council granting agency. It follows that the proposed Ph.D. program will target the development of kinesiology research skills relevant to all three pillars for each student. More specifically, our Department specializes in research training in the following key areas of kinesiology research, with recent Ph.D. graduates in each of these six main specialization areas:

- Adapted Physical Activity
- Biomechanics
- Exercise Physiology
- Motor Control and Learning
- Physical and Health Education Pedagogy
- Sport and Health Psychology

Because kinesiology is an interdisciplinary field, it enables collaborative partnership with other health research disciplines. Thus, the ability to conduct interdisciplinary research is also an important objective pursued in the proposed Ph.D. program. In sum, we make a commitment to train McGill Ph.D. in Kinesiology Sciences students to develop their research breadth and depth, so they can become international leaders of kinesiology research.

3. Related Programs at McGill - brief discussion of related programs offered at McGill, and how the new program is different.

Below are the doctoral programs currently delivered by McGill University that are the most similar to the proposed Ph.D. in Kinesiology Sciences (with their affiliate unit):

- Human Nutrition (School of Dietetics and Human Nutrition)
- Rehabilitation Science (School of Physical and Occupational Therapy)
- Biological and Biomedical Engineering (Biomedical Engineering Department)
- Epidemiology, Biostatistics (Epidemiology, Biostatistics & Occupational Health)
- Physiology (Department of Physiology), Experimental Medicine (Medicine)
- Neuroscience (Integrated Program in Neuroscience)
- Psychology – Experimental Psychology Track (Department of Psychology)
- Educational Studies (Integrated Studies in Education)
- Educational Psychology (Educational and Counselling Psychology)

The first three listed programs are designed for students with professional training in their respective fields (e.g. nutritionists, physiotherapists, engineers). The next three are more similar to ours in that the admission path requires an academic background in Sciences (traditionally an M.Sc.), and they are also characterized by a broader, interdisciplinary knowledge base, although not specifically health-focused. Finally, the next three are more grounded in the Social Sciences and Humanities, the latter two being the only Ph.D. programs offered in the Faculty of Education, KPE's home Faculty. However, none of those three programs are as grounded in interdisciplinarity across the natural, health and social sciences to the same extent as the proposed program. *The Ph.D. in Kinesiology Sciences will be unique in that its core discipline deals with human movement, with research approaches that could as well be grounded in the health sciences, the natural science and engineering, and the social sciences and humanities.*

4. Similar Programs Offered Elsewhere – list of Ph.D. programs offered at our peer institutions (within Quebec, Canada and internationally).

Kinesiology/Exercise Sciences departments can be found in various University Faculties, schools or units, or even outside the academic setting (e.g. sport institute, clinical setting). In Quebec, the Kinesiology Department at the Université de Montréal is an independent unit reporting directly to the University Provost, whereas in Université Laval it is part of the Faculty of Medicine. In McGill, the Department of KPE is housed in the Faculty of Education, due to the history and tradition related to our physical education program. The variety in these affiliate structures has impacts on the content and areas of specialization within the respective Ph.D. programs. For instance, the proposed Ph.D. program incorporates Physical and Health Education Pedagogy as one of its areas of specialization whereas the Kinesiology Ph.D. program at Université Laval program includes obesity and diabetes as areas of expertise, with the associated research conducted in the clinical setting, and has a separate Ph.D. program in Psychopedagogy / Sport an Physical Education stream. Therefore, our Ph.D. program will be the only one in Quebec with a dedicated research focus on physical and health education and adapted physical activity integrated into its Ph.D. in Kinesiology Sciences program, providing a unique, interdisciplinary profile and skillset to its graduates.

The Shanghai Ranking (www.shangairanking.com) recently unveiled a ranking of Sport Science Schools and Departments for the year 2016 (all of which would offer a doctoral program in a discipline linked to Kinesiology). This ranking is led by a diverse group of institutions located in Australia (Deakin), England (Loughborough), the USA (South Carolina) but also several North European and Scandinavian Countries (Denmark, Norway, Germany, Netherlands). Among the u21 Universities, the one with the highest ranking Sport Science unit is the University of Queensland (5th on the Shangai ranking), followed by the University of Birmingham (12th), and Canada's University of British Columbia (16th). On this list, McGill's Department of Kinesiology and Physical Education sits in 60th position, as the 11th Canadian institution (*and the first one without a current Ph.D. program*). Only two other Kinesiology-related Departments in Quebec have their own Ph.D. programs: Université Laval, which stands ahead of McGill in the Shanghai Departmental ranking in 41st position, and Université de Montréal, which is ranked below McGill's KPE Department in the Shanghai rankings. *Thus, despite not having a formal Ph.D. program, McGill's KPE Department is able to rank higher than other comparable Departments with Ph.D. programs in the world, but nevertheless, sits comparatively low in 60th position worldwide compared to how the majority of McGill Departments rank compared to their own peer institutions worldwide.*

Section B: Academic Dossier

1. Overview of the Proposed Program

The Ph.D. in Kinesiology Sciences is designed for flexibility and focus on research. Below is a description of its academic content (Table 2), comprising 8 required courses totaling 12 credits and including the 0-credit comprehensive examination course, and a list of Complementary courses, from which students must choose a minimum of 6 credits. It should be noted that students admitted with a Master's degree in Kinesiology or related discipline may have parts of these academic program requirements waived. Finally, other courses may be taken as identified by the student's supervisory committee.

Required courses (12 cr)	Complementary courses (6 cr)
EDKP 605 Research Methods (3 cr)	EDKP 603 Individual Reading Course 1 (6 cr)
EDPE 676 Intermediate Statistics or equivalent (3 cr)	EDKP 616 Individual Reading Course 2 (3 cr)
EDKP 617 Seminar in Kinesiology and Physical Education 1 (0 cr)	EDKP 630 Human Walking Mechanics (3 cr)
EDKP 618 Seminar in Kinesiology and Physical Education 2 (0 cr)	EDKP 635 Modeling Human Movement (3 cr)
EDKP 619 Seminar in Kinesiology and Physical Education 3 (0 cr)	EDKP 640 Advanced Ergonomics (3 cr)
EDKP 620 Seminar in Kinesiology and Physical Education 4 (0 cr)	EDKP 650 Research in Physical Education Pedagogy (3 cr)
<i>EDKP 661 Current Topics in Kinesiology Research (6 cr) *new course*</i>	EDKP 652 Cardio-Respiratory Exercise Physiology (3 cr)
EDKP 701 Ph.D. Comprehensive Examination (0 cr)	EDKP 654 Sport Psychology (3 cr)
	EDKP 655 Inclusive Physical Activity (3 cr)
	EDKP 662 Nerve/Muscle Exercise Response (3 cr)
	EDKP 664 Motor Learning (3 cr)
	EDKP 665 Motor Behaviour and Disability (3 cr)
	EDKP 671 Experimental Problems (3 cr)
	EDKP 672 Experimental Problems (6 cr)

Table 2: Ph.D. Kinesiology Sciences course content. * note only two courses appearing above are not part of the Department of KPE's current offering: EDPE 676 (permission to list this course has been granted by the corresponding Department Chair, please see consultation record), and EDKP 661 (new course proposal to be submitted along with this new Program proposal, see below).

2. Required Academic Activities - including comprehensive exam, thesis seminar, responsible conduct of research course, etc.

The standard Ph.D. program requirements (e.g. completion of comprehensive exam by end of year 2), as well as associated policies and procedures stipulated by Graduate and Postdoctoral Studies (e.g. progress tracking) will be incorporated into this new program, as they already are part of the Ad Hoc Ph.D. offering followed in the Department of Kinesiology and Physical Education.

3. Required Courses (including any newly proposed courses) – capstone course, research methods, mandatory seminar series, statistics, etc.

Table 2 lists all required courses for the Ph.D. in Kinesiology Sciences program. The academic core of the program will be the new course, tentatively called EDKP 661 Current Topics in Kinesiology Research (please see new course proposal form and preliminary course outline, appendix A). EDKP 661 is a two-term, 6-credit course that will serve as the Capstone course for each student cohort. The course description is the following:

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.

From the program perspective, this course will serve to provide Kinesiology research breadth to each student enrolled in the program, whereas individual research thesis work will be designed to provide program depth to students in their own area of specialization.

4. Complementary Courses – selection of courses from the department and other units that students in the program will find relevant or informative to take during their Ph.D. studies.

Table 2 (above) provides a list of complementary courses at the 600-level or above currently being offered in the KPE Department. Additional courses may be substituted at the request of the student's supervisory committee for their pertinence and relevance to the student's individual specialization within the Ph.D. in Kinesiology Sciences program.

Section C: Resources

A detailed budget is currently being prepared, with the majority of resources allocated towards growing our program (e.g. advertisement, program coordination, program delivery related costs). Below is a table showing a preliminary rough estimate for our enrolment count, based on information available as of Jan. 17th 2017 on time to graduation, attrition, and projected number of KPE tenure track professors.

Academic year	New admits	Total enrolment	Full-time KPE Supervisors
2016/17	(5)	(20)	13
2017/18	5	18	14
2018/19	6	22	16
2019/20	7	26	17
2020/21	8	29	17
2021/22	8	31	18
2022/23	9	34	18
2023/24	9	37	18
2024/25	10	39	18
2025/26	10	41	18

Table 2: Enrollment projections for the Ph.D. in Kinesiology Sciences.

Conclusion

As a Department, McGill's KPE

- Has an academic mission in line with the developments of the field of Kinesiology (movement science), an academic discipline that is well integrated into University offerings worldwide since the 1990s.
- Does not have a formal Ph.D. Kinesiology program (in contrast to comparable Departments of the G13 and of most comparable Universities worldwide);
 - if it did, it would only be the 3rd one in Quebec, and the only one offered in English, representing a sizeable recruitment asset
- Has been accepting, supervising and graduating Ph.D. students sporadically since the late 1980's, and consistently since the mid-2000's, to the current sustained enrolment of about 20 students.
- Has a solid infrastructure to support current and future students, in terms of space, equipment, and grant support from comparatively successful KPE members.
- Is thus requesting formalization of a Ph.D. program in Kinesiology Sciences.

EDKP 661 Current Topics in Kinesiology Research (6 credits)

Fall 2018 – Winter 2019

Department of Kinesiology and Physical Education (KPE), McGill University

Class Schedule

Location: Currie Gym 305/6

Times: Mondays 9:35 am–12:35 pm

Format

Lectures & Seminars

Course Coordinator

Dr. Shane Sweet; Email: shane.sweet@mcgill.ca

Course Description

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:

Throughout the course, students will:

1. Develop an understanding of the scope of Kinesiology from the current scientific literature
2. Identify current and future trends in Kinesiology
3. Develop research paradigms targeting specific topics relevant to physical activity and health from a variety of Kinesiology sub-disciplines
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 mobilization plans to effectively communicate Kinesiology research to a variety of end-users (e.g., community members, coaches, teachers, patients, employers)

Prerequisites

EDKP 605 Research Methods or equivalent; EDPE 676 Intermediate Statistics or equivalent

Readings

Lecture notes, weekly reference articles and links will be available on MyCourses.

Methods of Evaluation

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

- **Report on current & future trends:** a written assignment following Lecture 1 and associated readings, with an objective of critically analyzing a future trend in Kinesiology research, amongst the ones discussed in class. Students will explain the origins of this trend, describe its current state, 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.
- **For/against debates:** pairs of students with complementary specialization area will engage in two critical debates with another pair of student about a current 'hot topic' in kinesiology research related to the previous block of five lectures during the Fall semester (e.g. Is the higher occurrence of work-related musculoskeletal disorders in women due to sex (biological) or gender (socio-cultural) differences?).
- **Written research proposals:**
 - 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 several research approaches presented during the Fall semester). The goal of Proposal 1 is to encourage student to develop a research idea that can serve as the premise for their PhD thesis. Proposal 1 is to be no more than 10 double spaced pages, excluding title page and references.
 - Proposal 2 (interdisciplinary), a group of three students from different sub-disciplines of Kinesiology will submit, at the end of the Winter semester, a collective interdisciplinary research proposal drawing from kinesiology or relevant health research field. Groups will have to integrate at least two disciplines to develop research questions, 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, the perspective of the knowledge user will be incorporated into an integrated knowledge mobilization plan 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 larger breadth of their research for proposal 2. The goal of these critiques is to provide an opportunity to students to critique their peers work and provide constructive feedback to improve an end-product. Original and feedback improved proposals will be assessed along with comments provided to improve the original proposals.
- **Oral research proposals:**
 - Proposal 1 will parallel the objectives of the written research proposal 1 and will be presented individually at the beginning of the Winter semester.
 - Proposal 2 will parallel the objectives of the written research proposal 2 and will be presented by groups at the end of the Winter semester.

- *Critiques of the oral presentations* will be performed on a one-to-one basis for proposal 1 and as a group for proposal 2 (with the attending audience). Students will be required to provide constructive feedback to presenting students/group that is aimed at improving the delivery and content of the presentation.

Grading Scheme

Report: current & future trends	10%
For/against debates (2)	10%
Written research proposals (2)	36%
Research Proposal Critique (2)	10%
Oral research proposal (2)	24%
<u>Oral research proposal Critique (2)</u>	<u>10%</u>

100%

Course Schedule

FALL SEMESTER: INTRA-DISCIPLINARY ASPECTS IN KINESIOLOGY RESEARCH	
Weeks	Topics
1	The disciplinary field of Kinesiology: what is it? Past, present, future (S. Sweet, C. Paquette)
2	Kinesiology & Applied Exercise Physiology: research advances in the determination of physical activity targets for a healthy population (R. Andersen)
3	Kinesiology & Basic Physiology: methodological advances for the study of exercise & cardio-respiratory physiology in health and disease (D. Jensen)
4	Kinesiology, Motor Control & Learning: Technological advances for imaging and manipulating control of the human body to augment its mobility (C. Paquette, T. Milner)
5	Kinesiology & Biomechanics: Technological advances to measure and model human forces and motions (D. Pearsall)
6	Kinesiology & Muscle Anatomy & Physiology: advanced methods to study muscle structure and function, from the molecule to the whole-body (D. Rassier, T. Milner, D. Jensen, J. Côté)
7	<i>For/against debates round 1</i>
8	Kinesiology & Ergonomics: lab-based and workplace-based research advances to detect and prevent work-related injuries (J. Côté)
9	Kinesiology & Adapted Physical Activity: advanced research approaches for effective physical activity programming for individuals with disabilities (W. Harvey, S. Sweet)
10	Kinesiology & Health Education Pedagogy: advanced research methods to appropriately account for age, sex, gender and cultural diversity in kinesiology research (L. Schaefer)
11	Kinesiology & Health Psychology: technological advances for effectively communicating physical activity targets for a healthy population (L. Duncan)
12	A case of collaborative research in Kinesiology: merging sport psychology and biomechanics research to better prevent concussion chronicity (G. Bloom, D. Pearsall)
13	<i>For/against debates round 2</i>

WINTER SEMESTER: INTER-DISCIPLINARY ASPECTS OF KINESIOLOGY RESEARCH	
Weeks	Topics
14-15	<i>Oral research proposals 1 - Critiques</i>
16	Working with other disciplines: What is interdisciplinary research and how can you achieve it? [S.Sweet, KPE + Guest lecture from a McGill affiliated Interdisciplinary Research Centre (e.g., Center for Interdisciplinary Research in Rehabilitation of Greater Montreal; Centre for Interdisciplinary Research on Montreal; or Interdisciplinary Research Network on Discrimination and Inclusion)]
17	Working with other disciplines to advance research: the case of a contribution of kinesiology to prehabilitation research for better medical outcomes (C. Scheede-Bergdahl, KPE)
18	Working with Kinesiology researchers: Panel of experts composing of collaborators of KPE members in fields related to medicine & physiology. <i>Confirmed Interested Panelists: Sylvie Lambert (Nursing); Benjamin Smith (Medicine); Michael Sidel (Neuroscience)</i>
19	Working with Kinesiology researchers: Panel of experts composing of collaborators of KPE members in allied health fields (e.g., physiotherapy, nutrition). <i>Confirmed Interested Panelists: Stefanie Blain-Moraes (Biomedical engineer); Shawn Robbins (Physiotherapy); Hugues Ploudre (Nutrition);</i>
20	Working with Kinesiology researchers: Panel of experts composing of collaborators of KPE members in the social sciences (e.g., education, business, psychology). <i>Confirmed Interested Panelists: Lisa Starr (Education);</i>
22	End-user/Patient engagement: How can end-users inform Kinesiology research? (S. Sweet, KPE)
23	Recapping interdisciplinary research: A discussion on how the past 6 lectures advance Kinesiology research? (Sweet, KPE)
24	Beyond research: developing an effective integrated knowledge mobilization plan (S. Sweet)
25-26	<i>Oral research proposals 2 - Critiques</i>

Academic Integrity statement:

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 le site www.mcgill.ca/students/srr/honest/).

I encourage you to visit the above mentioned websites as soon as possible to insure that you are aware of the definitions of cheating, plagiarism and other academic offences that are used by McGill. Simply taking this initiative may help you avoid accidental and unfortunate situations. Also, I encourage you to visit the following website for precious help on how to refer to internet resources in your assignments, and especially, how to critically evaluate the scientific value of what you read on the internet:

<http://www.mcgill.ca/library/library-findinfo/internet/>

Right to Bilingual 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.

"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).

Please contact the instructor at the beginning of the semester should you wish to explore this option further.

Additional policy statements:

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.

As the instructor of this course I endeavor to provide an inclusive learning environment. However, if you experience barriers to learning in this course, do not hesitate to discuss them with me and the [Office for Students with Disabilities](#), 514-398-6009.

McGill has policies on sustainability, paper use and other initiatives to promote a culture of sustainability at McGill." (See the [Office of Sustainability](#).)

In keeping with McGill's [preparedness planning strategies with respect to potential pandemic or other concerns](#), In the event of extraordinary circumstances beyond the University's control, the content and/or evaluation scheme in this course is subject to change.

Additional policies governing academic issues which affect students can be found in the McGill Charter of Students' Rights" (The Handbook on Student Rights and Responsibilities is available [here](#)).