

# KINESIOLOGY AND HEALTH STUDIES

## Departmental Facilities

The School of Kinesiology and Health Studies is situated at 28 Division Street. The School's building provides state-of-the-art offices, classrooms, seminar rooms, and laboratories for all graduate programs. Lab areas include Ergonomics/ Biomechanics Research Centre, Exercise Physiology Laboratory, Human Vascular Control Laboratory, Cardiovascular Stress Response Laboratory, Muscle Physiology Laboratory, Physical Activity Epidemiology Laboratory, Health Promotion Laboratory, Psychology of Sport and Physical Activity Laboratory, Socio-Cultural Studies of Health, Sport and the Body Laboratory, and Revved Up Laboratory. Labs contain relevant equipment, computer facilities, interview rooms, video-editing equipment and other laboratory resources for research. Graduate students also have access to facilities in various cognate departments.

## Graduate Student Support

Full-time students who are eligible for funding awards are required to apply for external financial support through CIHR, SSHRC, and NSERC as applicable and if eligible, and internal OGS funding support if eligible. Consideration for internal fellowship funding opportunities is contingent upon application to these external funding sources. All students are automatically considered for teaching assistantships.

## Admissions Requirements

A minimum of a B+ standing or 77% overall average in a four-year bachelor degree or equivalent program is required for admission to the School's Master's degree programs. Students may be required to complete an undergraduate course-qualifying year if they do not meet these criteria.

## Faculty

### Director

Pyke, K.

### Associate Director and Coordinator of Graduate Studies

Martin, L.

### Professor

Adams, M.L., Côté, J., Janssen, I., King, S.J., Latimer-Cheung, A., Lévesque, L., Ross, R.

### Associate Professor

Costigan, P.A., Fergus, S., Gurd, B., Martin, L., Masuda, J., Power, E., Pyke, K., Tomasone, J., Tschakovsky, M.E.

### Assistant Professor

Bisung, E., Kangmennaang, J., Lee, E.Y., Manson, G., McGlory, C., Selinger, J., Szto, C.

### Cross Appointed Faculty

Adams, M.A., Brouwer, B., Bryant, J.T., Collins, P., Davies, G.A.L., Morin, E.L., O'Donnell, D., Pelland, L.

## Programs of Study

The School of Kinesiology and Health Studies offers a multi-disciplinary graduate program that includes studies in Biomechanics Ergonomics, Physical Activity Epidemiology, Exercise Physiology, Health Promotion, Psychology of Sport, and Socio-Cultural Studies of Sport, Health and the Body at both master's and doctoral levels.

- Kinesiology and Health Studies - Doctor of Philosophy (<https://queensu-ca-public.courseleaf.com/graduate-studies/programs-study/kinesiology-health-studies/kinesiology-health-studies-phd/>)
- Kinesiology and Health Studies - Master of Arts (<https://queensu-ca-public.courseleaf.com/graduate-studies/programs-study/kinesiology-health-studies/kinesiology-health-studies-ma/>)
- Kinesiology and Health Studies - Master of Science (<https://queensu-ca-public.courseleaf.com/graduate-studies/programs-study/kinesiology-health-studies/kinesiology-health-studies-ms/>)

## Courses

Notes:

1. Not all courses are offered in any one year. If a course is not offered in one year, it is frequently offered in the subsequent year.
2. Admission to all courses is in consultation and approval with the course instructor.
3. Every attempt will be made to arrange programs to suit the interests and needs of individual students.
4. The course timetable for each academic session is available on the School's web site. (<https://skhs.queensu.ca/>)
5. All courses are 3.0 credit units except KHS-899 and 999, which are 6.0 credit units.

### KHS 830 Health Promotion Research Seminar

This colloquium-style course provides students with a foundation in various methods of practice-based discovery, primarily quantitative, used by health promotion researchers. Topics include ethics, study design, sampling, measurement, evaluation, and data analysis. The course is



tailored each semester according to students' thesis needs.  
Offered jointly with EPID 830.  
EXCLUSION: EPID 830

#### **KHS 849 Motion Analysis**

This course covers the application, instrumentation and techniques of human motion analysis. Topics include 2D and 3D kinematics, force measurement, link segment analysis and the application of these techniques to able-bodied and disabled populations. To integrate the material, the course combines readings, lectures, laboratories and projects. (Offered jointly with RHBS 872/RHBS 972).  
EXCLUSIONS: RHBS 872/RHBS 972

#### **KHS 851 Physical Tests and Measurement**

An advanced theoretical and practical course covering the application, instrumentation and techniques of kinetics, kinematics, kinesiological electromyography, and anthropometric analysis in the study of normal and abnormal human movement. (Offered jointly with RHBS 837.)  
EXCLUSION: RHBS 837

#### **KHS 857 Locomotor Neuromechanics**

The purpose of this course is to provide students with a comprehensive understanding of the mechanics, energetics, and control of human locomotion. We will explore current theories in biomechanics and motor control, as well as the foundational behavioral and sensorimotor evidence that underpin these theories. A focus will be placed on applying this understanding to the rehabilitation of movement disorders and the design and control of robotic assistive devices. (3.0 credit units)

#### **KHS 859 Biomechanics of Human Movement**

A seminar course on the biomechanics of human motion in rehabilitation, sport, and ergonomics. Topics include measurement and analysis techniques, modeling, and the study of selected applications of the biomechanics of human movement of able-bodied and disabled populations. Course offered in odd years jointly with RHBS 871.  
EXCLUSION: RHBS 871

#### **KHS 862 Community-Based Programming**

In this seminar course students will apply theoretical concepts from the social and behavioural sciences, health education, and health communication to the planning, implementation, and evaluation of community-based physical activity programs. Interventions and programs for group, organization (e.g. schools), and community settings that target people, policies and the environment, will be emphasized. Offered jointly with EPID 862.  
EXCLUSION: EPID 862

#### **KHS 864 Advanced Topics in Sport Psychology**

A lecture-seminar course designed to provide comprehensive coverage of sport psychology. The course examines the development of the field, general theories and concepts, forms of measurement, and issues in the current literature.  
PREREQUISITE: KNPE 363 or KNPE 365 or permission of the instructor.

#### **KHS 865 Social Psychology of Sport and Exercise**

A lecture/seminar course designed to provide a comprehensive perspective of the field of social psychology as it applies to sport and physical activity settings. Historical, broad theoretical frameworks and methodological considerations will be examined.  
PREREQUISITE: KNPE 265 or equivalent or permission of the instructor.

#### **KHS 869 Bodies and Social Theory**

This course explores key theoretical approaches to the meaning, mood, and matter of bodies in the contemporary world. Through a range of topics that may include food, cancer, toxins, sport, fitness, reproduction, biometrics, and pain, we will attend to both the vitality of bodies and their subjection within enduring structures of power. Readings will emphasize anti-capitalist, critical race, postcolonial, Indigenous, feminist, queer, and trans perspectives.

#### **KHS 871 Critical Health Promotion**

This course will provide students with the opportunity to examine the genealogy of health, health promotion, and population health over the past half-century and to apply critical thinking skill within current theoretical and methodological applications in health promotion studies. (offered jointly with HLTH 493).

#### **KHS 872 Health Behaviour Change**

Introduction to theories, measures, and statistical methodologies typically used in health and exercise psychology research. Students will learn to critically evaluate and apply these key principles.

#### **KHS 873 Critical Methodologies: Politics of Knowledge**

This seminar explores the politics of knowledge in research that aims at social change. Taking a historical approach, it draws on feminism, Indigenous Studies, post-colonialism, and other critical perspectives to develop a frame for post-positivist, qualitative research. PREREQUISITE: KNPE 367 or equivalent.

#### **KHS 875 Qualitative Methods**

This course is an introduction to graduate level qualitative methods. The goal of the course is to provide a foundation for graduate students to collect and analyze qualitative data using methods such as interviews, focus groups, and observation.

EXCLUSION: RHBS 832

### **KHS 877 Intersectionality and Knowledge Translation**

Intersectionality helps us understand our own position as researchers as much as it does our research participants and stakeholders. We want to get down to the details of understanding *which* people, in *which* contexts, and under *which* circumstances. This class will unfold in two distinct parts. In Part 1, we will explore the development and application of intersectionality as a theoretical lens and methodological approach. Students will choose a research topic to unpack throughout the term and each week we will centre a different identity asking: *What story does this intersection tell? How does the story change?* In Part 2, we will focus on the practice of and politics around knowledge translation. Students will choose a form of knowledge translation that they think best suits the research story they have been creating. (3.0 credit units)

### **KHS 884 Muscle Physiology**

A lecture-seminar course in which muscular, metabolic, and endocrine adaptations to exercise will be discussed in detail focusing on the effects of acute exercise and physical conditioning on the major energy producing systems (carbohydrate and lipid metabolism). Prerequisite: KNPE 427 or equivalent.

### **KHS 885 Oxygen Transport in Exercise: Cardiovascular and Respiratory Responses to Increased Muscle Metabolic Demand**

A lecture-seminar course examining control mechanisms and limiting factors of the oxygen transport system's support of exercising muscle metabolism. Topics covered will include the mechanisms involved in regulation of muscle oxygen delivery, conflicting demands of blood pressure vs. muscle oxygen delivery vs. core temperature regulation, limitations to peak aerobic capacity. The impact of training on some of the above topics will also be explored. PREREQUISITE: KNPE 429 or equivalent.

### **KHS 886 Clinical Exercise Science**

This is a lecture-seminar course in which the utility of exercise or physical activity as a treatment strategy for a wide range of clinical outcomes will be considered. Both the acute and chronic effects of exercise on cardiometabolic risk factors will be considered. PREREQUISITE: KNPE 427 or equivalent.

### **KHS 887 Special Topics I**

A focus on specific issues in one of the three fields of study offered which include Applied Exercise Science; Physical Activity Epidemiology and Health Promotion; and Psychology and Socio-Cultural Studies of Physical Activity. May be

offered by current faculty or visiting scholars. PREREQUISITE: KNPE 427 or equivalent.

### **KHS 891 Statistics**

A seminar course which will acquaint the students with the concepts and principles of quantitative statistical analysis including parametric and non-parametric methods. Students will present various topics throughout the course and critically evaluate research in their area of study.

EXCLUSION: RHBS 834/RHBS 934

### **KHS 892 Special Topics II**

A focus on specific issues in one of the three fields of study offered which include Applied Exercise Science; Physical Activity Epidemiology and Health Promotion; and Psychology and Socio-Cultural Studies of Physical Activity. May be offered by current faculty or visiting scholars.

### **KHS 893 Physical Activity Epidemiology**

A lecture-seminar course that investigates the epidemiological relationships among physical activity, fitness and health. The course also examines the historical development of the field, study designs and analytical frameworks. A particular emphasis is placed on issues in the current literature. Lectures: 1 x 3 hours

### **KHS 894 Applied Multivariate Data Analysis**

The course gives students an introduction to multivariate and multilevel statistical modeling. After a thorough review of multiple regression analysis including interactions, non-linear relationships, and mediation, students learn the basics of analyzing data with a nested structure, such as individuals within groups or observations within individuals. Lectures 1 x 3 hours

### **KHS 895, 897 Individual Study**

A study topic in a subject area related to biomechanics, exercise physiology, social psychology of sport and exercise and/or sociology of sport, selected by the student under the guidance of a faculty member. Normally this course will take the form of a closely supervised reading course in an area of the instructor's expertise.

### **KHS 896 Special Topics III**

This seminar course may cover topic areas including health behaviour change; sport psychology; exercise psychology; food studies; gender, sexuality and sport; neighbourhoods and health; globalization and health; social movements in health; HIV prevention; community-based participatory research; health, risk and the body. Offered by various graduate faculty or visiting scholars. One term only. Lectures 1 x 3 hours.

### **KHS 898 Individual Project**



The student will work under the guidance of a project supervisor to complete a project. The completed project will be evaluated by the project supervisor and at least one other faculty member. One term only.

**KHS 899 Master's Thesis Research**

**KHS 999 Ph.D. Thesis Research**