Opportunities for Independent Studies 2024-25

(updated April 23rd, 2024)

Independent Study Courses in Health Studies (HLTH 595, 491, and 456)*
Independent Study Courses in Kinesiology (KNPE 595, 491, and 456)*

Please submit applications directly to the relevant researcher(s) whose area of research is of interest. There is no deadline for applications, however there are a limited number of positions available. More opportunities may become available closer to the term(s).

HLTH/KNPE 595, 491, and 456 are designed to provide opportunities for students in Kinesiology or Health Studies who may be interested in pursuing research in laboratories or on community-based projects. Students will gain experience with the research process as it applies to the various fields of Kinesiology and Health Studies. This process may include, but is not limited to experimental design, data collection and analysis, literature searches, manuscript writing, and presentation skills.

** Please note that HLTH/KNPE 491 and 456 are 3.0 credit unit courses which can be taken in either fall or winter terms (some summer term opportunities also exist), and HLTH/KNPE 595 is a 6.0 credit unit course which spans across both the fall and winter terms.*

Research Summaries for Participating Faculty Members

The following is a summary of research interests for the faculty members within the School of Kinesiology and Health Studies who have indicated their intent to supervise fourth-year independent courses next year. Further information on each faculty member can be found on the SKHS website. Other faculty members may also consider supervising undergraduate students at a later point in time, and this document will be updated accordingly.

Dr. Jennifer Tomasone (Revved Up Research Group)

Number of positions: One student in HLTH or KNPE 595 for Fall/Winter 2024-2025

Dr. Tomasone is a Co-Director of the Revved Up Research Group, which strives to translate research knowledge about physical activity into practical guidelines and programs that foster full and meaningful participation for all Canadians. In 2024/2025, Dr. Tomasone is seeking one undergraduate thesis student interested in contributing to the work of the **Canadian Disability Participation Project (CDPP) 2.0** – a large research-community partnership that aims to make physical activity a quality experience for all persons with disabilities living in Canada. Dr. Jennifer Tomasone is one of the Co-Directors of the CDPP 2.0 and leads the group's Mentorship Team. By 2030, the Mentorship Team will produce guidelines for creating quality research mentorship for undergraduate and graduate students with a disability. To begin to work towards this goal in 2024/2045, the Mentorship team will begin an environmental scan of Kinesiology undergraduate curricula across Canada to identify gaps in disability-related content. The undergraduate thesis student will have the opportunity to work with the research team to develop a project that mutually suits both the student's interests and research team goals. The student will work closely with graduate students and/or post-doctoral fellows from the Revved Up lab.

Interested students should send a cover letter, unofficial transcript and a resume/CV to Dr. Tomasone (tomasone@queensu.ca). Please title the email "KNPE/HLTH595 Application" (c.c. to watering@queensu.ca).

Dr. Gerome Manson– Fall/Winter KNPE or HLTH 352/491/595

The **Sensorimotor Exploration Lab** (colloquially known as SMEL) is a neuromechanics lab in the School of Kinesiology and Health Studies at Queen's University. We study the processes underlying the planning, control, and learning of skilled movement in both neurologically-healthy and neurologically-impaired populations (e.g., spinal cord injury, multiple sclerosis, spinal muscle atrophy). Our scientific work is at the intersection of kinesiology, psychology, engineering, systems neuroscience, and rehabilitation. Our lab thrives because of the diversity and commitment of our members, and we welcome new members from diverse academic and cultural backgrounds.

Interested students should contact Dr. Gerome Manson (gm99@queensu.ca) with a cover letter, unofficial transcript, and a resume/CV (c.c. to watering@queensu.ca). The cover letter should indicate one's interest in one of the research themes outlined on the lab webpage.

IMPORTANT NOTE: We invest heavily in our undergraduate members and students who have joined the lab previously have moved on to positions in graduate school, medicine, physiotherapy, and occupational therapy (see lab alumni on website). Undergraduate students have also engaged in the publication of research articles and have presented at national (in Montreal and Toronto) and international conferences in France (see lab website). This level of achievement requires a lot of time and dedication associated with learning new skills and techniques. While high marks (e.g., greater than an A or 80%) are possible, they are relatively hard to achieve in this research experience. Please consider this when applying and we look forward to hearing from you.

Dr. Elijah Bisung

Dr. Elijah Bisung will offer two research internship positions this year. Interns will be exposed to a broad range of potential global health research areas. On-going studies include examination of adolescent peer leadership and HIVD/AIDS education in Ghana, the role of trust in health promotion activities among marginalized groups,

and “ad hoc” social welfare programs during COVID-19 and their implication for women’s health in sub-Saharan Africa.

Interested students should send a cover letter, unofficial transcript, and resume or CV to Dr. Bisung by e-mail eb120@queensu.ca (c.c. to watering@queensu.ca).

Dr. Stevenson Fergus (Health Promotion and HIV) – Positions in HLTH 456/491

Dr. Stevenson Fergus is happy to supervise 4th-year independent study projects in health promotion, public health, health policy, the social determinants of health, or related areas. Students wishing to study aspects of HIV/AIDS, gender-based violence, substance use, harm reduction, and the opioid overdose crisis are especially encouraged to apply, although other student interests can also be accommodated. There’s no need to have a finalized topic identified, as he will help you to identify one. Opportunities include a 3-credit literature review (HLTH 456), or a 3-credit special project (HLTH 491).

Interested students should contact Dr. Fergus at ferguss@queensu.ca (c.c. watering@queensu.ca), and attach a cover letter, unofficial transcript, and resume or CV. Please title the e-mail ‘KNPE/HLTH Independent Study Application’ in the subject line.

Dr. Jean Côté (Sport Psychology)

Number of positions: **One** student for KNPE 595 for 2024-25

Are you interested in being involved in research exploring the elements of positive youth sport experiences? Research in the sport psychology lab at Queen's focuses primarily on the characteristics of the youth sport environment (e.g., coach-athlete relationships, teammate interactions, coach characteristics) that create favourable conditions for excellence and participation in sport. In addition, current projects also relate to group dynamics principles (e.g., cohesion, subgroups) and coaching behaviours (e.g., transformational leadership) in sport.

Those students accepted for these positions will have opportunities to contribute to several ongoing projects and will be working with data derived from observations (e.g., coding videos), interviews (e.g., transcription), and questionnaires (e.g., inputting data). Finally, students typically experience the research process within the field of sport psychology, from data collection (e.g., video-recording sport competition, questionnaire distribution) all the way to data analysis and writing.

Interested students should contact Dr. Jean Côté at jc46@queensu.ca (c.c. to watering@queensu.ca) and attach a cover letter, unofficial transcript, and résumé or CV. Please title the e-mail ‘KNPE/HLTH Independent Study Application’ in the subject line.

Dr. Bob Ross (Lifestyle and Cardiometabolic Research Lab)

Number of positions: One or two positions each in KNPE 491 and KNPE 595.

The Lifestyle and Cardiometabolic Research Unit under the supervision of Dr. Robert Ross will offer **three** research internship positions this year. Interns will be exposed to research that explores the associations between exercise and various health outcomes, and will participate in data collection, analysis and interpretation. Ongoing studies include examination of dose-response issues between exercise intensity, volume and metabolic risk factors including glucose tolerance, inflammation and dyslipidemia.

- Interested students should send a cover letter, unofficial transcript, and resume or CV to Dr. Ross by e-mail rossr@queensu.ca (c.c. to watering@queensu.ca).

Dr. Michael Tschakovsky (Human Vascular Control Lab)

Number of positions: Three

There are **three** research positions available in the Human Vascular Control Laboratory under the supervision of Dr. Michael Tschakovsky for the 2024-25 academic year.

Human Vascular Control Laboratory Mission: To understand the nature of mechanisms controlling blood vessels involved in adjusting exercising muscle blood flow (and thereby oxygen delivery), how disturbances and disease affect this control, and how exercise training can restore/improve this control.

Our tolerance for physical activity plays an important role in our quality of life and depends in part on how well our muscle's demand for oxygen is met. This requires that the cardiovascular system constantly adjusts blood flow to active muscles while maintaining arterial blood pressure. Accomplishing these goals requires integrated control of cardiac output with vasodilation and vasoconstriction of both exercising skeletal muscle and other vascular beds. **Basic Science Research** in our laboratory is aimed at finding answers to the fundamental questions: How is matching oxygen delivery to demand in the exercising muscle achieved? Are there important differences between individuals in the mechanisms involved in this matching and in their effectiveness? Can these mechanisms be improved by exercise training, and if so, does the type of exercise training matter?

Interns will be exposed to the research tools, approach to research question development, study design, and gain experience in data collection and analysis.

- Interested students should send a cover letter and unofficial transcript to Dr. Tschakovsky at mt29@queensu.ca (c.c. to watering@queensu.ca). Please title the e-mail 'KNPE/HLTH 352 Research Internship Application'.