Brock

Faculty of Applied Health Sciences

Graduate Studies in Health Science and Kinesiology

THE MASTER'S PROGRAM IN THE FACULTY OF APPLIED HEALTH SCIENCES at Brock University offers an unique educational opportunity that emphasizes an individualized program of study, including mentorship-style learning and concentrated inquiry in an area of interest, leading to the completion of a research-based thesis. Course work in the student's area of interest will complement her or his research focus, and provide additional breadth of knowledge.

Faculty of Applied Health Sciences fields of study:

- MSc in Health Sciences
- MSc in Kinesiology
- MA in Community Health
- MA in Health & Physical Education
- MA in Leisure Studies
- MA in Sport Management

The MASTER OF SCIENCE IN HEALTH SCIENCE and The MASTER OF SCIENCE IN KINESIOLOGY provide graduate students in-depth training, knowledge and research experience through their thesis work, while also providing a broad, cross-disciplinary pedagogical approach with interactive small group learning. Graduate courses and faculty members' scholarly interests reflect the range of expertise available in areas pertaining to personal, group, community, and population health.

Key features

- Thesis-based with a supervisor assigned prior to entrance to ensure an appropriate match with student interests
- Guaranteed financial assistance for every student
- Minimum four course requirement (2 core – Philosophical and Methodological Issues, Quantitative Data Analysis; 2 optional – chosen by the student)
- Residency requirement is one year (3 academic terms); expected degree completion is two years (6 academic terms)

Admissions Requirements

To be eligible for admission into the MSc in Health Science or the MSc in Kinesiology, applicants will typically have an honours Bachelor's degree in the area of health sciences, kinesiology, physical education, or related discipline, and have successfully completed an undergraduate level course in research methods, including quantitative data analysis. Applicants who do not have an undergraduate research methods course and/or a data analysis course, may be admitted to the program as a transition student. These students, however, must successfully complete an undergraduate research methods and/or analysis course in the first two terms in order to continue in the graduate program. Applicants whose primary language is not English, or who have a degree from a university where the language of instruction was not English, must provide certification of English language proficiency.

Official transcripts indicating a minimum B average (second-class honours standing), a sample of written work, a statement of interests and goals, and three letters of reference will be required. Agreement from a faculty advisor to supervise the student is also required for admission to the program.

Application Deadline

Completed applications, including all supporting documentation, references, and transcripts, are to be submitted to the Brock University Office of Graduate Studies by February 15. Admission will be offered for the following September.

Faculty & Research Interests

MSc in Kinesiology

Allan Adkin, PhD (University of Waterloo, 2001). Associate Professor. Motor control and neurocognitive factors that influence strategies for upright stance and falling in older adults and persons with neurological deficits. aadkin@brocku.ca

Stephen Cheung, PhD (University of Toronto, 1998). Associate Professor and Canada Research Chair in Environmental Ergonomics. Environmental physiology, including heat, cold and high altitude), human temperature regulation, body fluid balance, protective clothing. scheung@brocku.ca

David Ditor, PhD (McMaster University, 2004). Assistant Professor. Exercise and other neuroprotective strategies as a means of attenuating health problems in spinal cord injury, with an emphasis on autonomic impairment, cardiovascular disease, and functional recovery. dditor@brocku.ca

Bareket Falk, PhD (McMaster University, 1991). Associate Professor. Pediatric exercise physiology, effects of exercise on growing bone, muscle strength and resistance training, effects of exercise and training on children with chronic disease. bfalk@brocku.ca

Gail Frost, PhD (McMaster University, 1995). Associate Professor. Movement patterns and muscle activation in violinists, injury treatment and rehabilitation, therapeutic exercise, problem-based learning, biomechanics and physiology of children's locomotion. gfrost@brocku.ca

David Gabriel, PhD (McGill University, 1995). Professor. Neural adaptations associated with activity & training. Measurement issues, signal processing & mathematical modeling of the surface EMG signal from motor units. dgabriel@brocku.ca

Nota Klentrou, PhD (University of Montreal, 1991). Professor. Pediatric exercise physiology, exercise interventions in health and disease (e.g., osteoporosis), applied physiology, bioenergetics, temperature regulation, exercise immunology. nklentrou@brocku.ca

Kelly Lockwood, PhD (University of Alberta, 1996). Associate Professor. Integrating biomechanical and physiological approaches to high performance training; implementing sport-specific training methods for on-ice sports activities. Developing infrastructure support for long-term athlete development. klockwood@brocku.ca

Jae Patterson, PhD (McMaster University, 2005). Assistant Professor. Practice factors facilitating motor skill acquisition across the lifespan in persons with various abilities. jpatterson@brocku.ca

Sandra Peters, PhD (University of Guelph, 2001). Associate Professor. Understanding the interaction and the regulatory balance between carbohydrate and fat metabolism in response to diet and exercise. speters@brocku.ca

Michael Plyley, PhD (University of Western Ontario, 1977). Professor. Capillary supply of skeletal muscle fibres in health and disease, angiogenesis as an adaptive strategy of muscle in response to changing conditions. mplyley@brocku.ca

Brian Roy, PhD (University of Waterloo, 2000). Associate Professor. Regulation of physiological responses and muscle metabolism during exercise and dietary manipulations. broy@brocku.ca

Craig Tokuno, PhD (Karolinska Institutet, 2007). Assistant Professor, Neuro-physiological and biomechanical control of human movement, in particular, how the central nervous system contributes to the control of postural and locomotor tasks, and how these neuro-mechanical mechanisms are affected by age or neuromuscular deficits (e.g., stroke). ctokuno@brocku.ca

Rene Vandenboom, PhD (University of Waterloo, 1996). Associate Professor. Translation of the chemical signal for contraction (calcium) into mechanical force. Molecular mechanism for muscle force potentiation and its role in modulating muscle performance during exercise. rvandenboom@brocku.ca

MSc in Health Science

Brent E. Faught, PhD (University of Toronto, 2001). Associate Professor. Physical activity epidemiology and how habitual physical activity contributes to a healthy lifestyle. bfaught@brocku.ca

Brian Jeynes, PhD (University of Western Ontario, 1979). Associate Professor. The pathogenic role of the blood-brain barrier in neurodegenerative disease - in particular, Alzheimer's disease; health/medical bioethics. bjeynes@brocku.ca

Paul LeBlanc, PhD (McMaster University, 2004). Assistant Professor. Influence of diet and exercise on skeletal muscle health. pleblanc@brocku.ca

Jian Liu, PhD (Community Health & Epidemiology, SUNY at Buffalo, 2002). Associate Professor. Chronic diseases epidemiology with focus on cardiovascular risk related factors. jliu@brocku.ca

Debbie O'Leary, PhD (University of Waterloo, 2001). Associate Professor. Focus is on arterial dynamics and the regulation of arterial blood pressure in adults and children. doleary@brocku.ca

Ana Sanchez, PhD (Karolinska Institute, Sweden 1999). Associate Professor. Emergent and re-emergent pathogens, tropical parasites, infections and migration, international health. Special interest in surveillance, prevention and education programmes. asanchez@brocku.ca

Martin Tammemagi, PhD (University of Toronto, 1998). Associate Professor. Focus on cancer epidemiology, with special areas of interest being lung cancer and cancer screening. mtammemagi@brocku.ca

Litsa Tsiani, PhD (University of Toronto, 1997). Associate Professor. Cell signaling mechanisms in health and disease. Insulin resistance and the regulation of skeletal muscle glucose transport. ltsiani@brocku.ca

Hui Di Wang, PhD (University of Saskatchewan, 1995). Associate Professor. Regulation of vascular structure and function in normal and diseased models. hwang@brocku.ca

Graduate Courses

- Graduate Integrative Seminar in Applied Health Sciences I & II
- Philosophical and Methodological Issues
- Quantitative Data Analysis and Interpretation
- Biostatistics in Applied Health Science Research
- Modern Epidemiology
- Health Ethics
- Measurement Issues in Applied Health Science Research
- Interventions in Physical Activity and Health
- Pediatric Exercise Science
- Cell Pathways in Health and Disease
- Advanced Regulation of Fuel Metabolism
- Muscle Physiology
- Principles of Physiological Signals and Instrumentation

CONTACT

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