

## BHSc Research Practicum Available Projects 2023-2024

Name of Project	Research Tutor	Project Application Name
Identifying school staff perceptions of substance use and mental health trends during the COVID-19 pandemic	Adam Cole	<b>Cole</b>
Innovations in Pediatric Respiratory Therapy and Mechanical Ventilation at the Hospital for Sick Children	Mika Nonoyama	<b>Nonoyama</b>
Abilities Centre Research and Program Evaluation	Emilie Michalovic, Mikaeli Cavell and Meagan Marques	<b>Michalovic_Cavell_Marques</b>
Assessing the reliability of maximum voluntary contraction protocols	Nick La Delfa	<b>La Delfa</b>
Neuromodulation techniques to facilitate cognitive/behavioural interventions in neurodegenerative disorders and mental health disorders	Amer Burhan	<b>Burhan</b>
Evaluation of an image-based dietary assessment tool powered by artificial intelligence	JoAnne Arcand	<b>Arcand</b>
Gut brain axis and behavioural and psychological symptoms of dementia	Sarah Elmi	<b>Elmi</b>
Fundamental Motor Skills of Children with Autism Spectrum Disorder: 5 year follow up	Meghann Lloyd	<b>Lloyd</b>
Exploration of a volunteer hospital program in ensuring recruitment and retention	Manon Lemonde	<b>Lemonde</b>
The effect of recurrent neck pain on upper limb motor control	Paul Yielder and Bernadette Murphy	<b>Yielder_Murphy</b>
The role of central sensitization and sensorimotor integration in understanding the biological basis of Chiropractic	Nick Antony, Hailey Tabbert and Bernadette Murphy	<b>Antony_Tabbert_Murphy</b>
The effect of changing neck sensory input on brain plasticity	Bernadette Murphy and Paul Yielder	<b>Yielder_Murphy_2</b>
Examining the physical, social and educational benefits of CLEAN exergame for persons with dementia to promote hand hygiene and influenza vaccine uptake: A feasibility study	Winnie Sun	<b>Sun</b>
Use of Educational Toolkits to Promote Environmental Health	Caroline Barakat	<b>Barakat</b>

Improving Nurses Communication with Elderly Individuals with a Focus on Deprescribing Delivered via Simulation	Adam Dubrowski	<b>Dubrowski_1</b>
Testing the effectiveness of maxSIMghost (an ultrasound skills training model) with practicing nurses	Adam Dubrowski	<b>Dubrwocki_2</b>
Evidence Synthesis in Maternal and Public Health	Ginny Brunton	<b>Brunton</b>
Molecular Biology - Fundamentals, Methods and Human Health Applications	Holly Jones Taggart	<b>Jones Taggart</b>
Cardiovascular outcomes by age, sex, and race	Laura Banks	<b>Banks</b>
Clearing the Path: A Glossary of Jargon in Talent Identification and Selection	Nick Wattie	<b>Wattie</b>

## Research Practicum Form

To be completed by Research Tutor

(Please submit to [Mahboobeh.Zabihhosseinian@ontariotechu.ca](mailto:Mahboobeh.Zabihhosseinian@ontariotechu.ca) by **February 25, 2022**)

Name of Research Tutor: <b>Adam Cole</b>	Number of Possible Positions: <b>2</b>
Name of Project: Identifying school staff perceptions of substance use and mental health trends during the COVID-19 pandemic	
Project location: Ontario Tech University, North Campus	
Project Description: While there have been significant decreases in youth use of some substances (e.g., cigarettes), changing product availability, social norms, and public policies have resulted in increases in youth use of other substances (e.g., vapes, marijuana). The COVID-19 pandemic was a significant event that disrupted and shifted many health behaviours, including substance use. The need for physical distancing and isolation from school also had a significant impact on students' mental health. School staff are important partners in health promotion programs. However, few studies have sought their opinion about why students use substances and how substance use behaviours have changed among youth. This project will identify educators' perceptions of factors that have influenced substance use behaviours and the mental health of students in California during the COVID-19 pandemic.	
Possible Roles for Student(s): -conducting literature review -qualitative coding and thematic analysis of previously collected data -summarizing findings into a report	
Special Requirements: (i.e. Entry Immunization Form, Police Check, specialized skills etc...) None	

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Name of Research Tutor: <b>Mika Nonoyama</b>	Number of Possible Positions: <b>2</b>
Name of Project: Innovations in Pediatric Respiratory Therapy and Mechanical Ventilation at the Hospital for Sick Children	
Project location: The Hospital for Sick Children (SickKids)	
Project Description: The Lung Health Pathway at SickKids' comprises of: artificial airway management; initiation & weaning from mechanical ventilation (MV); extubation; and post-extubation respiratory management. A better understanding of current respiratory support clinical practices & patient outcomes is needed to optimize a child's treatment path. There are currently several potential projects for the research practicum. This includes: background research (literature review), and data collection retrospectively or prospectively on various respiratory therapy and/or mechanical ventilation interventions in the Critical Care Unit (CCU), the Emergency Department (ED), and/or in-patient hospital units.	
Possible Roles for Student(s): Literature review, data collection/extraction and cleaning; aiding with data analysis (qualitative and quantitative); contributing to writing reports; collaborate with graduate student(s), and clinical staff; developing educational resources. There may also be opportunity for students to do a buddy shift in the Critical Care Unit, ED, and/or hospital units at SickKids (together with staff respiratory therapists), depending on circumstances like workload and patient acuity levels.	
Special Requirements: (i.e. Entry Immunization Form, Police Check, specialized skills etc...) <b>REQUIRED:</b> Minimum A- in HLSC3910 (research methods); must be able to work at SickKids for the duration of the research practicum (which requires entry immunizations, police check, mask fit, and initial orientation at the hospital). Must be able to work independently. Foundational knowledge of mechanical ventilation e.g. completion of this course <a href="https://www.edx.org/course/mechanical-ventilation-for-covid-19">https://www.edx.org/course/mechanical-ventilation-for-covid-19</a>	
<b>ASSETS:</b> Experience working with electronic information systems (hospital based preferred) & with data organization; experience in academic/research writing e.g. research proposals, peer-reviewed publications; experience working with Microsoft Office, especially Excel; knowledge of respiratory physiology and pathophysiology.	

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Name of Research Tutor: Emilie Michalovic/Mikaeli Cavell/Meagan Marques	Number of Possible Positions: <b>2</b>
Name of Project: <b>Abilities Centre Research and Program Evaluation</b>	
Project location: Abilities Centre, Whitby, ON	
<p>Project Description:</p> <p>Abilities Centre is a non-profit organization that takes a comprehensive approach to inclusion and accessibility. Our facility in Whitby acts as a community hub, research lab, and inclusion incubator. We support a variety of initiatives on an ongoing basis: Sport and Recreation, Mixed Ability Sport, Therapeutic Recreation, Employment Services, ASAD (Academy for Student Athlete Development), Thrive program. Additionally, it is a community recreation centre where anyone is able to purchase a membership and use the facility and sign up for classes.</p> <p>The Abilities Centre Research team works to systematically evaluate programs and services, support the continuous development of evidence-based programming, and build a program of research.</p> <p>There is currently a number of projects available for the research practicum. There is also some opportunity to assist in delivery of interventions or programming alongside a Registered Kinesiologist to support the actioning of learnings.</p> <p>Knowledge of accessibility and inclusion considerations would be an asset.</p>	
<p>Possible Roles for Student(s):</p> <p>Students may be involved in all aspects of the research/program evaluation process including:</p> <ul style="list-style-type: none"> <li>- Literature review,</li> <li>- Research methodology design,</li> <li>- Data collection,</li> <li>- Transcription or data cleaning,</li> <li>- Data analysis, and/or</li> <li>- Report preparation and other knowledge translation activities.</li> </ul> <p>Students will be invited to participate in other meetings supervisors engage related to the program including: weekly team meetings, external partnership meetings, and internal planning meetings with programming teams to observe all aspects of program evaluation process.</p>	
<p>Special Requirements: (i.e. Entry Immunization Form, Police Check, specialized skills etc...)</p> <ul style="list-style-type: none"> <li>- Police Check - Vulnerable Sector Screening</li> </ul>	

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Name of Research Tutor: <b>Nick La Delfa</b>	Number of Possible Positions: <b>2</b>
Name of Project: <b>Assessing the reliability of maximum voluntary contraction protocols</b>	
Project location: <b>Occupational Neuromechanics &amp; Ergonomics Laboratory</b>	
Project Description: Maximum voluntary contractions (MVCs) are the maximum amount of force or torque that you can generate with your muscles. In neuromechanics and biomechanics research, baseline MVCs are often used as a reference for what percentage of maximal muscular effort individuals are performing, allowing us to standardize workloads across participants of different strength. In this practicum experience, a study will be conducted to examine the various methods of obtaining baseline MVC strength and determine which method has the most reliability. With these data, we are hopeful that we will create a best practice method for obtaining baseline MVCs.	
Possible Roles for Student(s): The student will work directly with Dr. La Delfa and his graduate students to complete this project. As part of the practicum, the student will also assist in other data collections and analyses that are ongoing in the lab, though the primary focus will be on the above listed project.	
Special Requirements: (i.e. Entry Immunization Form, Police Check, specialized skills etc...) Successful completion of KINE 2040 (Biomechanics) and KINE 4475 (Occupational Ergonomics) with a grade of A- or higher. Preference will also be given to students who have also completed or will be concurrently enrolled in HLSC 4476 (Clinical Biomechanics) and/or KINE 4478 (Advanced Ergonomics & Human Factors).	

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Name of Research Tutor:	Number of Possible Positions:
Dr Amer Burhan	2
Name of Project: Neuromodulation techniques to facilitate cognitive/behavioural interventions in neurodegenerative disorders and mental health disorders	
Project location: Ontario Shores	
Project Description: Students will conduct a literature review to (1) examine the role of neuromodulation techniques (e.g. tDCS, rTMS, ketamine) in facilitating cognitive and behavioural treatment efficacy (e.g. CBT, cognitive training) in individuals with neurodegenerative disorders and mental health disorders, and (2) investigate potential facilitatory mechanisms (e.g., priming brain neuroplasticity). This is a promising area of research and we would like the student to analyze and synthesize the research thus far in order to summarize the current state of the literature, identify gaps and indicate future directions.  Students will also have the opportunity to support studies involving this area of research (e.g. ketamine & iCBT, tDCS & cognitive training studies).	
Possible Roles for Student(s): <ul style="list-style-type: none"> <li>• Literature review</li> <li>• Support study coordinators on various studies (e.g., data entry, facilitate on-site study visits, track patient compliance to study procedures)</li> <li>• Consent patients</li> </ul>	
Special Requirements: (i.e. Entry Immunization Form, Police Check, specialized skills etc...) Students will be required to meet the following requirements, and documentation of the following:  <ol style="list-style-type: none"> <li>1) Student's immunization status is in compliance with the Communicable Disease Surveillance Protocols jointly published by the Ontario Hospital Association and the Ontario Medical Association</li> <li>2) COVID-19 Vaccination</li> <li>3) Canadian Police Information Centre (CPIC) criminal record check document including a vulnerable sector search conducting within the last twelve (12) months and Ontario Shores will retain a photocopy of the original document</li> </ol>	

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Name of Research Tutor: JoAnne Arcand	Number of Possible Positions: 1
Name of Project: Evaluation of an image-based dietary assessment tool powered by artificial intelligence	
Project location: Ontario Tech University, North Campus. Some travel to Durham region primary care clinics may be required.	
Project Description: <p>The objective of this project is to validate a cutting-edge app called RxFood that uses artificial intelligence (AI) and mobile phone photos to estimate nutrient intakes with ease. Specifically, the objective of this research is to determine the degree to which RxFood accurately estimates nutrient intake. Participants use the app for 3 days (i.e., take photos of their food) while concurrently completing a weighted 3-day food record which is the “gold standard” for self-reported dietary assessment methods. Three-day food records are manually analyzed using ESHA software while RxFood analyses occur automatically within the app. Statistical analysis will compare the extent to which the RxFood nutrient estimates are in concordance with the food record nutrient estimates. This study is funded by the Ontario Centres for Innovation (OCI).</p>	
Possible Roles for Student(s): <p>The student will work as part of an interdisciplinary team of graduate students, postdoctoral fellows, and research associates. The student may have the opportunity to participate in patient recruitment (online and in person) and will be trained to analyze data collected from the food records which form the basis of analyses to determine nutrient intakes. The student will have dedicated desk space available to them to conduct their research in Dr. Arcand’s lab, which is located in the U5 building on the North Campus of Ontario Tech. The student will have the opportunity to be integrated into Dr. Arcand’s research team which includes working closely with research associates, PhD students and postdoctoral fellows. They will be expected to participate in weekly lab meetings with the entire research team.</p>	
Special Requirements: (i.e. Entry Immunization Form, Police Check, specialized skills etc...) <p>A student accepted to this project will have a keen interest in nutrition and have received a grade of A- or higher in a nutrition course. A cover letter and resume (CV) will demonstrate that the student is:</p> <ul style="list-style-type: none"> <li>• detail-oriented.</li> <li>• able to think critically.</li> <li>• self-directed, take initiative and are resourceful and responsive.</li> <li>• professional and has excellent written and verbal communication skills.</li> <li>• able to work both independently and as part of a team.</li> </ul>	

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Name of Research Tutor: Sarah Elmi, MD, FRCPC	Number of Possible Positions: 2
Name of Project: Gut brain axis and behavioural and psychological symptoms of dementia	
Project location: Geriatric transitional unit	
Project Description:  <p>Majority of patients living with dementia are affected by significant behavioural and psychological symptoms such as agitation and aggression. BPSD can increase cost of caretaking, and length of stay at hospitals. Studies have shown that once dementia reaches its final stages, one in every two or three affected people will experience severe weight loss. Weight loss may occur despite the person with advanced dementia being given all the food they want. We are observing that numerous patients with dementia, have significant weight loss, which usually coincides with increased rate of cognitive loss, and at the same time more behavioural challenges. We have previously explored behavioural patterns of patients with rapid weight loss and those without. In this study, we want to study gut health and dysbiosis. We are exploring correlation of behavioral symptoms, gut Microbiome, patients' hunger level and weight-loss, in an observational study in geriatric transitional unit. Physiological data will be obtained.</p>	
Possible Roles for Student(s): <ul style="list-style-type: none"> <li>• Obtaining consent from patients and power of attorneys, or substitute decision-makers</li> <li>• Assistance with completing the questionnaires, data extraction from electronic chart, obtaining samples, data entry, analysis, literature review, write ups, poster presentations</li> </ul>	
Special Requirements: (i.e. Entry Immunization Form, Police Check, specialized skills etc...)  hospital requirements	

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Name of Research Tutor: Meghann Lloyd	Number of Possible Positions: 2
Name of Project: Fundamental Motor Skills of Children with Autism Spectrum Disorder: 5 year follow up	
Project location:                      Ontario Tech main campus	
Project Description: Children with Autism Spectrum Disorder (ASD) experience delays in their motor skills. 5 years ago we conducted a motor skill intervention. These children are now 8-10 years old. This project will bring the original cohort back to the lab for a series of assessments and also recruit a new group of 8-10 year olds with ASD who did not get the intervention. We will be looking to see if there are any developmental differences between the two groups but also gain insight into the trajectory of development in the original cohort 5 years later	
Possible Roles for Student(s): Students will be expected to be present during data collection with the families (could include evenings and weekends). Students will be involved in recruitment, data entry, preparation for data collection, simple data analysis, set up and take-down of the data collection, downloading accelerometer data, other tasks as assigned by the professor.	
Special Requirements: (i.e. Entry Immunization Form, Police Check, specialized skills etc...)	
Vulnerable populations Police Check is required. Kinesiology student Experience working with children is required, working with children with disabilities is a strong asset. Must be available for data collection - which could include evenings and weekends due to family availability.	

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Name of Research Tutor: Manon Lemonde	Number of Possible Positions: 1 position
Name of Project: Exploration of a volunteer hospital program in ensuring recruitment and retention	
Project location: Faculty of Health Sciences	
Project Description: The following questions will be the basis of this exploration: 1- What is the purpose of a hospital volunteer program? What is a volunteer hospital program? 2- Why should hospitals have volunteers? 3- Should hospitals meet a provincial standard for volunteers as does for staff? 4- Does each hospital independently decide how a volunteer program operates? 5- Is there currently a baseline or minimal standard for evaluation of a volunteer hospital program?	
Possible Roles for Student(s): 1- extensive literature review of evidence and grey literature (including websites, etc.) 2- summary of the results of the literature review 3- develop a proposal highlighting the elements of volunteer hospital program including strategies of recruitment, retention, and evaluation	
Special Requirements: (i.e. Entry Immunization Form, Police Check, specialized skills etc...)  No special requirements except demonstration of organizational and critical thinking skills. Autonomy is required.	

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Name of Research Tutor: Paul Yelder/Bernadette Murphy	Number of Possible Positions: 1 or 2
Name of Project: The effect of recurrent neck pain on upper limb motor control	
Project location: Ontario Tech Human Neurophysiology Laboratory	
Project Description:  Neck pain and fatigue affects sensory feedback from the spine to the brain, and can affect the brain's ability to blend information coming from other senses, affecting co-ordination and the ability to learn new movements. This research uses electroencephalography (EEG) to examine differences in the brain's response to learning novel motor skills in those with neck pain as compared to healthy participants.	
Possible Roles for Student(s): Students will assist in recruiting and testing participants, as well as performing data analysis. They will: 1) acquire skills in collecting electromyography (EMG) data. 2) acquire skills in using electroencephalography (EEG) to record electrical activity from the brain using somatosensory evoked potentials (SEPs) to study sensory processing. 3) acquire skills in data analysis of EMG, EEG, and SEP data. 4) build on skills in statistical analysis and data presentation. 5) develop skills in communicating with research participants, including explaining the project to obtain informed consent.	
Special Requirements: (i.e. Entry Immunization Form, Police Check, specialized skills etc...) Students who have completed Anatomy, Introduction to Movement Science and are enrolled in, or completing, Motor Control with strong grades are eligible to apply.	

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Name of Research Tutor: Nick Antony/Hailey Tabbert (Dr. B. Murphy)	Number of Possible Positions: 1 to 2
Name of Project: The role of central sensitization and sensorimotor integration in understanding the biological basis of Chiropractic	
Project location: Human Neurphysiology and Rehabilitation Laboratory	
Project Description: The objectives of this project are to: 1) determine the effects of chronic pain (central sensitization) on the neural control of hand and wrist movements and 2) to study the effects of Chiropractic treatment on neural control. Participants will be asked to perform one experimental session that will last around 3 hours. In this session, arm muscle electrical activity will be recorded while participants perform a hand force matching task with the arm sensitized via the application of capsaicin cream (an over the counter topical pain cream similar to A535, tiger balm, biofreeze etc.) Some individuals with neck pain will receive chiropractic treatment during the trial session.	
Possible Roles for Student(s): Students will assist in recruiting and testing participants, as well as performing data analysis. They will: <ol style="list-style-type: none"> <li>1) acquire skills in collecting multi-channel EMG data.</li> <li>2) acquire skills in data analysis of EMG data</li> <li>3) build on skills in statistical analysis and data presentation</li> <li>4) develop skills in communicating with research participants, and explaining the project to obtain informed consent</li> </ol>	
Special Requirements: (i.e. Entry Immunization Form, Police Check, specialized skills etc...) Students who have completed Anatomy, Introduction to Movement Science and who are enrolled in or completing Motor Control with strong grades are eligible to apply.	

or

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(Please submit to [Donna.Groom@ontariotechu.ca](mailto:Donna.Groom@ontariotechu.ca) by **February 24, 2023**)

<b>Name of Research Tutor:</b> Bernadette Murphy/Paul Yelder	<b>Number of Possible Positions:</b> 1 to 2
<b>Name of Project:</b> The effect of changing neck sensory input on brain plasticity	
<b>Project location:</b> Ontario Tech North Campus Human Neurophysiology Lab	
<b>Project Description:</b> Neck pain and fatigue affects sensory feedback from the spine to the brain, and can affect the brain's ability to blend information coming from other senses, affecting coordination and the ability to learn new movements. This research uses a state of the art eye tracking system to measure changes in the way the output of cerebellum is affected by neck pain and fatigue. This work will measure the vestibulo-ocular and cervico-ocular reflexes, and hand-eye coordination in individuals with and without neck pain, and before and after neck muscle fatigue. The VOR and COR keep the eyes on target despite head and/or body movements that include the head, whether these movements are self-produced or externally imposed.	
<b>Possible Roles for Student(s):</b> Students who participate in this project will assist in recruiting and testing participants, as well as performing data analysis. They will: <ol style="list-style-type: none"><li>1) acquire skills in collecting eye-tracker data collection and analysis.</li><li>2) measuring upper limb kinematics</li><li>3) Learn to measure spatial and temporal error in maintaining target fixation throughout head movement.</li><li>4) build on skills in statistical analysis and data presentation</li><li>5) develop skills in communicating with research participants, and explaining the project to obtaining informed consent.</li></ol>	
<b>Special Requirements: (i.e. Entry Immunization Form, Police Check, specialized skills etc...)</b> Students who have completed Anatomy, Introduction to Movement Science and are enrolled in or completing Motor Control with strong grades are eligible to apply.	

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Name of Research Tutor: <b>Dr. Winnie Sun</b>	Number of Possible Positions: <b>2</b>
Name of Project: <b>Examining the physical, social and educational benefits of CLEAN exergame for persons with dementia to promote hand hygiene and influenza vaccine uptake: A feasibility study</b>	
Project location: <b>Ontario Tech University and Ontario Shores Centre for Mental Health Sciences</b>	
Project Description: <p>The purpose of this project is to develop an educational exergame for PWD to practice effective handwashing through the use of motion capture technologies, while delivering educational content related to infection control, and evidence-based resources to educate them about the importance of influenza/COVID-19 vaccine. Specifically, this project aims at examining the meaning and value of utilizing educational and social exergaming for PWD in the community and institutional settings. We propose that adding game components with accessibility features can increase learner’s engagement, which could positively improve retention of learning, and behavioral change related to hand hygiene and vaccine uptake. Using mixed methods approaches, this feasibility study will be implemented with the goal of developing and pilot-testing the CLEAN exergame for persons with dementia in the community (Adult Day Programs), and institutional settings (Geriatric Dementia Unit). CLEAN is a contactless exergame (game for eliciting physical/motor activity) to educate PWD regarding the importance of infection control/hand hygiene through the use of motion capture technologies. The exergame can capture the user’s hand movements associated with handwashing, mask-wearing as well as gaming features related to cleaning and disinfecting exercises. Our proposed solution is a low cost, non-invasive interactive exergame which is designed to use hand gestures to elicit user engagement, while providing feedback and evidence-based educational resources to support learning.</p>	
Possible Roles for Student(s): <ul style="list-style-type: none"> <li>• Organize regular team meetings and advisory committee meetings</li> <li>• Assist with Delphi methods (data collection of surveys and focus groups)</li> <li>• Assist with exergame prototype development</li> <li>• Assist with developing vaccine hesitancy educational material</li> <li>• Facilitate pilot, usability tests of exergame/education with persons with dementia and caregivers</li> <li>• Conduct qualitative interviews with persons with dementia and caregivers</li> <li>• Assist with data analysis of quantitative and qualitative results</li> <li>• Assist with knowledge translation products</li> </ul>	

Special Requirements: (i.e. Entry Immunization Form, Police Check, specialized skills etc...)

- Project management skills
- Experience with exergaming is preferred
- Interest in public health education
- Experience with working with persons with dementia
- Experience with SPSS software (or other statistical data analysis software) is preferred
- Experience with qualitative interview is preferred

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(Please submit to [Donna.Groom@ontariotechu.ca](mailto:Donna.Groom@ontariotechu.ca) by **March 10th, 2023**)

Name of Research Tutor: <b>Caroline Barakat</b>	Number of Possible Positions: <b>2</b>
Name of Project: <b>Use of Educational Toolkits to Promote Environmental Health</b>	
Project location: North Campus	
Project Description: There are two placements related to this project.  1) This research will consist of a scoping review of evidence on the effectiveness of educational toolkits related to environmental health, specifically personal care product (PCP) use and behavior change. A scoping review is relevant and more applicable than a systematic review in clarifying working definitions and conceptual boundaries, while maintaining breadth on this topic. For example, decisions will be made on what constitutes PCP, or how is behavior change assessed.  2) We will assess the effectiveness of using an educational toolkit that promotes behavior change in relation to sport participation for girls.	
Possible Roles for Student(s): 1. Undertaking a scoping review of research evidence on effective toolkits that can facilitate behavior change, and to identify the main elements that relate to environmental health.  2. Participant recruitment, sampling strategy, data collection, & data analysis.	
Special Requirements: (i.e. Entry Immunization Form, Police Check, specialized skills etc...) Excellent research skills, communication and analytical skills, and presentation skills. Knowledge of environmental health, sport programming and institutions is an asset.	

**Research Practicum  
HLSC 4998U & HLSC 4999U  
Fall 2023 - Winter 2024**

## **Research Practicum Form**

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Name of Research Tutor: Adam Dubrowski	Number of Possible Positions: 2
Name of Project: Improving Nurses Communication with Elderly Individuals with a Focus on Deprescribing Delivered via Simulation	
Project location: Virtual and In-person at OTU	
Project Description: This project aims to improve nursing communication skills when conversating with elderly individuals, with an emphasis on deprescribing. Researchers have proposed experiential learning, also known as simulation, as an effective way to improve communication skills in nurses. As a result, this project will take a simulation-based approach.	

Possible Roles for Student(s):

Possible Roles for students:

1. Test the developed program with 3<sup>rd</sup> and 4<sup>th</sup> year nurses at OTU. During this phase survey's will need to be sent to nurses to get their perspectives on the usability, content, and feasibility of the study. The results of the survey will help to improve the program.
2. Assist in evaluating the program's effectiveness in terms of nurses' communication skills while discussing deprescribing with older persons. This will be a pre and post-test research design in which nurses' communication abilities will be tested before to and after training scenarios. After the data has been collected, it will be thoroughly evaluated and analyzed. Students would contribute to this phase by assisting with scenario execution, data collection, and analysis.

Special Requirements: (i.e. Entry Immunization Form, Police Check, specialized skills etc...)

No special requirements are needed at this time.



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Name of Research Tutor: <b>Ginny Brunton</b>	Number of Possible Positions: <b>1</b>
Name of Project: <b>Evidence Synthesis in Maternal and Public Health</b>	
Project location: SHA453 and online	
Project Description: This project focuses on evidence synthesis in maternal and public health topics. The successful student will assist in the various stages of systematic reviews across projects, supervised and supported by Dr. Ginny Brunton. Projects include a systematic review of patient engagement in Canadian midwifery practice and policy, and rapid reviews of public health interventions related to Indigenous health.	
Possible Roles for Student(s): Students will assist in any stage of the systematic review, including eligibility screening, data extraction, critical appraisal, analysis/synthesis and creation of evidence summaries. They will attend project meetings and work as a member of the team. They will learn key project management skills, including taking minutes, scheduling meetings, creation and editing of review data extraction and analysis tools, and reference management through the review process.	
Special Requirements: (i.e. Entry Immunization Form, Police Check, specialized skills etc...) Ideally, the successful applicant will have an 85%+ average, have taken a Research Methods course, and demonstrate an interest in, or experience of maternal or public health research or course work. Students identifying as Indigenous are particularly welcome as their lived experience will be given special consideration related to their scholarly achievements.	

## Research Practicum Form

To be completed by Research Tutor

(Please submit to [Donna.Groom@ontariotechu.ca](mailto:Donna.Groom@ontariotechu.ca) by **March 10th, 2023**)

Name of Research Tutor: <b>Holly Jones Taggart</b>	Number of Possible Positions: <b>1</b>
Name of Project: <b>Molecular Biology - Fundamentals, Methods and Human Health Applications</b>	
Project location: UA 4460/ SHA 431	
Project Description: This project will strengthen skills in wet lab techniques such as cell culture and nucleic acid isolation and analysis.	
Possible Roles for Student(s): Culture and passage of cells, isolation of nucleic acids and/or protein and analysis of changes in gene expression profiles.	
Special Requirements: (i.e. Entry Immunization Form, Police Check, specialized skills etc...) Experience with molecular techniques and/or cell culture techniques is an asset.	

## Research Practicum Form

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Name of Research Tutor: <b>Dr. Laura Banks</b>	Number of Possible Positions: <b>2</b>
Name of Project: <b>Cardiovascular outcomes by age, sex, and race</b>	
Project location: Ontario Tech University, Toronto Rehabilitation Institute	
Project Description: Students will have the opportunity to participate in on-going cardiovascular research projects and programming at the Toronto Rehabilitation Institute (Cardiovascular Prevention and Rehabilitation Program). Previous research practicum students have had the opportunity to observe clinical exercise testing, cardiac rehab classes, collect and analyze patient data for manuscript preparation.	
Possible Roles for Student(s): Students will be expected to participate in the completion of a literature review, data collection, analysis, and manuscript writing. Work will be completed as part of a team. It may require local travel (on-site at Ontario Tech, TRI, and/or remote work). The final product for this practicum will be to complete and submit a manuscript to a peer-reviewed journal.	
Special Requirements: (i.e. Entry Immunization Form, Police Check, specialized skills etc...) Entry immunization form and other on-boarding activities (training modules, TCPS2 certification etc).	

## Research Practicum Form

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(Please submit to [Donna.Groom@ontariotechu.ca](mailto:Donna.Groom@ontariotechu.ca) by **March 10th, 2023**)

Name of Research Tutor: <b>Nick Wattie</b>	Number of Possible Positions: <b>1</b>
Name of Project: <b>Clearing the Path: A Glossary of Jargon in Talent Identification and Selection</b>	
Project location: ESA Lab (U5 67)	
Project Description: There are inconsistencies in the use and definition of commonly used terms in the field of talent development (see Dohme et al., 2016). In order to gain conceptual clarity, it is important to have a consensus of commonly used terminology. The aim of this study is to identify and define performance indicators of prospective athletes (physical, psychological, physiological, and sport-specific) that decision makers use to justify their rationale for athlete selection in basketball and hockey. This study will use a narrative review approach to (a) identify commonly used terminology from coaches and decision-makers use; (b) analyze terms and meanings if given; (c) group terms alike. The results will be analyzed through thematic analysis to group like terms to develop a universal glossary of our findings.	
Possible Roles for Student(s): The roles/objectives for the student will include: <ol style="list-style-type: none"><li>1. Data scrape Internet to extract athlete profiles discussing performance indicators</li><li>2. Scan and highlight key terms discussed by coaches, scouts, and decision-makers</li><li>3. Organize and manage data extractions to implement into glossary of terms</li><li>4. Help research team with development of questionnaire of key terms</li><li>5. Assist in the writing process to publish paper in talent identification journals</li></ol>	
Special Requirements: (i.e. Entry Immunization Form, Police Check, specialized skills etc...) Microsoft Office proficiency (specifically Excel), good data management skills, enhanced organizational capabilities, and advanced time management skills.	