MacPherson Student Partners Posting – Fall/Winter 2018-19

In 2013-14, the Arts & Science Program and the MacPherson Institute (then known as MIETL) collaborated to create "student scholar" positions for students who are interested in pedagogical research and innovation. Since this time, a wide range of students from across campus have contributed to the enhancement of teaching and learning at McMaster by participating in projects run at or in partnership with the MacPherson Institute. Members of the student partner team have contributed to the design and development of new courses, helped to create resources for faculty and students, and collaborated with staff and faculty partners on research projects related to teaching and learning. Several have also co-authored research articles and conference presentations related to their work.

Encouraged by these successes, we’re thrilled to continue the student partners program in Fall/Winter 2018-19. We’re currently looking for students to work on a number of projects. Some of these are already underway, while others are just being formulated, so students will have opportunities to enter into the work at the stage that is most of interest to them. These positions will involve 35-150 hours of paid work, between September 2018 and April 2019. The specific number of hours worked will depend on the project.

Projects for which student partners are currently being recruited are described on the following pages. If you are interested in filling one of the student positions, you will be asked to identify ONE to THREE of these projects and write a brief (~250 word) interest statement for each. These project interest statements should include the following:

- A description of why the project seems interesting/important to you. (Why do you want to join the project team? What are your goals in relation to the project?)
- A proposal for the role you might play on the project team. (What might you do to develop the project and help it meet its goals? What work do you see yourself carrying out?)
- An indication of the skills/experiences/interests/perspectives that you’d bring to the project team. (Why are you a good fit for this project?)

To apply, submit your project interest statements, along with some information about yourself, using the following application form: https://tinyurl.com/SPPFall18

Any student (undergraduate or graduate) enrolled at McMaster University is eligible to be a Student Partner. While prior experience with teaching and learning research/practice would be an asset, it is NOT required. We’re interested in working with a wide variety of students with a range of backgrounds and experiences, including members of equity seeking groups. Some projects do indicate preferences for students with particular experiences, skills, or educational levels, so be sure to read the project descriptions carefully and make the case for why you would be a good fit.

Applications MUST be received by 7 August 2018 at 4:30p.m. to be considered.

Further information about the student partners program, including guidelines for the application process, can be found in the Student Partners Handbook. If you have any questions about the student partner team, or about the MacPherson Institute and its work, please contact Dr. Beth Marquis at mi_sap@mcmaster.ca.
Project Descriptions: Fall/Winter 2018-19

2018-19 MacChangers

MacChangers is a student research program that provides a meaningful learning experience and transferable professional skills to multidisciplinary teams of undergraduate students. During the school year, each team develops a small research project that addresses the National Academy of Engineering’s Grand Challenge to restore and improve urban infrastructure with a focus on improving transportation in Hamilton.

We are looking to stimulate creative and analytical thinking, ethical values, and collaboration. To do so students will receive training in problem-solving, design thinking, project management, McMaster’s community engagement principles and ethical practices in research, to mention a few. Students also have the opportunity to network and showcase their projects to community and campus stakeholders.

The program is run from September to April, being 2018 - 19 our fourth year. Students will form teams of 4-6 students from all Faculties. We expect to work with 5-8 project teams.

Student partners are crucial in planning and running training sessions, as well as supporting
research activities since we have ethics clearance for the second time. This year student partners will be working more closely with teams in a mentorship role, attracting more Humanities, Social and Health Sciences students, and building an online community around the program through social media.

MacChangers staff: Beth Levinson (MacPherson), Arlene Dosen (Faculty of Engineering)

We anticipate that this project will involve approximately 60-75 hours of work. *Please note that this is only an estimate. A more precise approximation of hours will be provided to successful applicants before they begin.*

Applicants should be 3rd, 4th, or 5th year undergraduates or Masters students.

Assessing the Impact of Interdisciplinary Experiential Learning Courses in Science
The School of Interdisciplinary Sciences is expanding the number of Interdisciplinary Experiential Learning Courses (https://www.science.mcmaster.ca/isci/registered-students/ie-courses) in the 2018/19 year to open availability to all students in the Life Sciences Program. The intended goal of these courses is to give opportunities to students to engage in subject matter that is outside of their primary curriculum without concerns of grades as the courses are pass/fail. Past courses, that serviced students in the Integrated Science and Arts and Science Programs only, have included one-unit offerings exploring Hieroglyphs and Kentucky Caves (https://dailynews.mcmaster.ca/article/student-spelunkers-trade-class-work-for-caving/). With the courses set to expand in September 2018 it is an ideal time to gauge their impact from both the perspectives of the students and the instructors. While important to measure the interest of individual courses the primary research questions will be to: (1) Assess student perception on how the inclusion of one-unit experiential learning courses into their curriculum impacts their overall university experience, and (2) Determine the impact for instructors, given the opportunity to teach in a more experiential fashion, on their overall teaching philosophies. This project will involve numerous faculty and staff members, including Dr. Kim Dej, Dr. John Maclachlan, Dr. Sarah Symons and Dr. Chad Harvey, working with the student partners. Student Partners will be working on all aspects of this yet to be started project, including ethics approvals, survey design and dissemination.

We anticipate that this project will involve approximately 60-75 hours of work. *Please note that this is only an estimate. A more precise approximation of hours will be provided to successful applicants before they begin.*

Applicants should be 3rd, 4th, or 5th year undergraduates or graduate students of any level.

Best Practices From Competitive Teams
Engineering 4EX3 is an entirely new course offered by the Faculty of Engineering that recognizes student participation in competitive teams with academic credit. This course presents an ideal opportunity to study the educational value of these teams and the best practices for optimizing that value. The course is coordinated by Dr. Elizabeth Hassan (Engineering 1 and Mechanical
I am establishing a pedagogical research program centred on experiential learning. Initially my work will focus on what lessons we can learn from the teams’ technology transfer and organizational processes and how these existing best practices could be applied to learning in capstone or project based courses.

I am seeking a partner who could:
• Obtain consent and collect data from students in the class
• Conduct focus groups and semi-structured interviews
• Develop new analysis methods for the collected data

The student partner would be an active participant in developing the dissemination strategy for this work and could be a co-author if they wish. Ideally the student partner would have qualitative methods experience, but this is not a firm requirement.

We anticipate that this project will involve approximately 85-100 hours of work. *(Please note that this is only an estimate. A more precise approximation of hours will be provided to successful applicants before they begin.)*

Undergraduate or graduate students of any level are welcome to apply.

**Building a Program for Excellence in Clinical Instruction in the School of Nursing**

This purpose of this project is to develop a Program for Excellence in Clinical Instruction (PECI) in the School of Nursing whose goal will be to provide novice clinical faculty with a structured pathway for professional development in clinical teaching excellence. The Clinical Agency Unit Review will involve Student Partners accessing the clinical unit descriptions from each unit that is currently used for student group placements. Student Partners will help to create Learning Modules to address the following areas: 1) Overview to the SON, the Nursing Programs and Student Streams, the Curriculum and Program Courses of Study; 2) Overview to Clinical Group Teaching; 3) Faculty, Student, and Clinical Agency Preparation for Entering the Clinical Environment; 4) Facilitating a Successful Student Learning Experience in the Clinical Setting; 5) Overview to Student Evaluation Measures in Clinical Courses.

We anticipate that this project will involve approximately 85-100 hours of work. *(Please note that this is only an estimate. A more precise approximation of hours will be provided to successful applicants before they begin.)*

Applicants should be 3rd, 4th, or 5th year undergraduate students.

**Course Design and Delivery Consultants**

Students will be paired with instructors to work collaboratively on (i) designing or redesigning aspects of a particular course, or (ii) providing feedback and suggestions on the delivery of a course (i.e., student partner attends some lectures and offers feedback).

Student partners will meet with the program coordinators from the MacPherson Institute (Kris Knorr and Gabrielle Foran) on Saturday, September 8 from 10am – 3pm, and then for
approximately 1 hour per week to discuss relevant pedagogical theory, to provide meaningful feedback, and to offer effective mentorship.

The student partners are expected to meet with their faculty partner for 30-60 minutes per week to provide feedback and assistance in course development and delivery. In addition, the student partners will have approximately 2 hours per week for their own independent working time. The time commitment for the student partner is approximately 4 hours per week.

We anticipate that this project will involve approximately 50 hours of work. *(Please note that this is only an estimate. A more precise approximation of hours will be provided to successful applicants before they begin.)*

Applicants should be 3rd, 4th, or 5th year undergraduates or graduate students of any level.

Below are the faculty partners who are seeking student partners to assist them in course design or delivery.

- **Course: Medical Foundations: Neuroanatomy**
  - Faculty Partner: Angela Scott
  - Design or delivery partnership: Delivery
  - Must be available: various times throughout the semester; to be arranged with faculty partner
  - Undergrad or grad preferred: no preference
  - Additional information: Seeking student partner applicants who are interested in co-developing more accessible presentations, laboratory exercises, and learning activities that are aligned to course learning objectives.

- **Course: Race, Religion and Conflict (Anthro 1AB3)**
  - Faculty Partner: Karen McGarry
  - Design or delivery partnership: Delivery
  - Must be available: Mon and/or Wed, 10:30 – 11:20am
  - Undergrad or grad preferred: no preference
  - Additional information: Looking for student partner to provide perspective on the organization and delivery of lectures and course activities, which will inform the modification of the course for future semesters.

- **Course: Refugee Health: Policies & Practice (HlthSci 709)**
  - Faculty Partner: Olive Wahoush
  - Design or delivery partnership: Design
  - Undergrad or grad preferred: no preference
  - Additional information: Seeking a student partner to co-design this Nursing/Global Health course to be offered in a future semester.

- **Course: Tools for Chemical Discovery I (Chem 2LA3)**
  - Faculty Partner: Sharonna Greenberg
• Design or delivery partnership: Design
• Undergrad or grad preferred: Undergrad
• Additional information: Seeking a 3rd or 4th year Chemistry or ChemBio student to revise labs in this course. The student partner will contribute to the redevelopment of materials, as well as solicit feedback from students in the course to determine what has worked well, and what can be improved.

• Course: Global Health (HLTHAGE 4G03)
  o Faculty Partner: Lydia Kapiriri
  o Design or delivery partnership: Delivery
  o Must be available: Wednesdays 2:30-5:20pm
  o Undergrad or grad preferred: no preference
  o Additional information: A student partner is sought to provide perspective on various new teaching approaches that are used by the instructor.

• Course: Introduction to Professional Practice (Nurs2I04)
  o Faculty Partner: Maria Pratt
  o Design or delivery partnership: Delivery
  o Must be available: Tuesdays, 8:30 – 11:20am
  o Undergrad or grad preferred: no preference
  o Additional information: Seeking a student partner to evaluate some recently adopted teaching and learning activities, as well as create new learning activities for this course.

• Course: Human Nutritional Toxicology (LifeSci 3N03)
  o Faculty Partner: Veronica Rodriguez Moncalvo
  o Design or delivery partnership: Design
  o Undergrad or grad preferred: Undergraduate student
  o Additional information: Seeking an undergraduate student partner who, ideally, has previously taken LifeSci 3N03, to assist in the development of e-learning tools (online case studies) to increase student engagement with course material, for preparation for tests, as well as to bridge gap between lectures and tutorials (to better link lectures with tutorials).

• Course: Peer Mentoring in Laboratory Skills Development (LifeSci 3YY3)
  o Faculty Partner: Veronica Rodriguez Moncalvo
  o Design or delivery partnership: Delivery
  o Undergrad or grad preferred: no preference, but must have significant flexibility in their schedule, since the student partner will need to be available to attend tutorials at various times throughout the week
  o Additional information: Seeking a student partner who can video record peer mentors during tutorials throughout the semester as an additional method to provide formative feedback to the mentors (self-reflection) and the instructor. Previous video recording experience is an asset.
Course Refinements & Faculty Development
A Course Refinement is a process by which a faculty member or instructor can collect honest, useful, personalized, formative, and timely student feedback about a course they teach. On an instructor’s behalf, The MacPherson Institute (MI) collects student feedback, anonymizes it, and returns it to the instructor so that they can implement changes that address feedback at the midway point in the semester. It is a highly successful process that has received very positive feedback from instructors and students alike.

As student partner, you will conduct, analyze, interpret, and communicate Course Refinement feedback with instructors of a variety of undergraduate and/or graduate courses at McMaster. Working with an Educational Developer from MI, you will collect and perform qualitative analysis of student feedback, and support faculty in determining ways to enhance their courses and teaching.

This student partners project is suited for graduate students interested in educational development processes, working with faculty on facilitating course improvements, and conducting qualitative (and some quantitative) survey data analysis.

Project partners: Rebecca Taylor and Kris Knorr

We anticipate that this project will involve approximately 35-50 hours of work. *(Please note that this is only an estimate. A more precise approximation of hours will be provided to successful applicants before they begin.)*

Applicants should be Masters or PhD students.

Creating a Discipline-Specific OER List for McMaster
Open Educational Resources (OER) are teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others. —The William and Flora Hewlett Foundation

The advantages and benefits that OER represent for learners and educators address inequities around affordability, access, learner retention and diversity and offer opportunities for creating, co-creating and re-mixing content to suit teaching and learning needs. One of the barriers identified in faculty adoption and use of OER involves the time it takes to find suitable materials for their course (eCampusOntario, 2018). This project would help alleviate this as it involves the creation of a targeted OER list by discipline/subject area for faculty and department use.

As a student partner, you will assist in finding, evaluating and creating a list of OER specifically geared to the McMaster context. This list would be categorized and tagged by discipline and, when possible, at the course-level in collaboration with McMaster’s OER committee co-chairs. The OER List will be made available to all faculty and departments via the OER Committee’s library webspace, and will serve as a resource for staff assisting faculty with their selection of course materials (e.g., Library, MacPherson Institute, Campus Store).
The project is an ideal opportunity for students interested in open pedagogy, open practice and open access. In particular, this project may interest those students who have experience purchasing textbooks while as an undergrad, and who may be motivated to create opportunities for more accessible and affordable learning materials for students. Effective search and critical appraisal skills are assets.

Reference:

We anticipate that this project will involve approximately 85-100 hours of work. *(Please note that this is only an estimate. A more precise approximation of hours will be provided to successful applicants before they begin.)*

Applicants should be 3rd, 4th, or 5th year undergraduates or graduate students of any level.

**Development and Implementation of Simulation-Based Learning in Pain Medicine Residency and Fellowship**

Background and aim: Patient with chronic pain typically present with complex and interdisciplinary challenges. We aim to develop simulation based training scenarios for residents and fellows, working in chronic pain medicine. Students will meet an actor, playing a standardized patient, and will reflect on their performance, guided by an expert in pain management.

Project’s present status: We have developed two scenarios, which are ready for testing.

Type of work: Student partner will be present at test runs of scenarios, collect feedback among participants and simulation experts, manage databases, and help revising the scenarios in close collaboration with all involved parties.

The student will gain hands-on experience in simulator-based learning methodology and be a co-author of resulting publications.

Required skills: organization, communication, collaboration and writing skills. Beneficial: Some experience in qualitative and educational research, and knowledge about providing information material online.

Team:
Dr. Anne Scheidecker, MD, anesthesiologist, emergency physician, fellow in chronic pain, McMaster University (Project lead and coordination)
Dr. Linda Korz, MD, FRCPC, Anesthesiology Faculty, Lead in Simulation, McMaster University, Associate Clinical Professor, Staff anesthesiologist at Hamilton Health Sciences.
Sandra Monteiro, BSc, MSc, PhD (Psychology), Neuroscience and Behavior; Assistant Professor, Department of Health Research Methods, Evidence, and Impact; Director of Research and Analysis at Touchstone Institute in Toronto; Assistant Director of Research at the Centre for Simulation Based Learning at McMaster.
Celine Ling, BSc, 3rd year Masters of Applied Science in Interdisciplinary Biomedical Engineering. Stefan Schandelmaier, MD, PhD candidate in Health Research Methods.

We anticipate that this project will involve approximately 35-50 hours of work. (Please note that this is only an estimate. A more precise approximation of hours will be provided to successful applicants before they begin.)

Undergraduate or graduate students of any level are welcome to apply.

**Development of Accessible and Interactive E-Learning Case Studies**

This project aims at developing accessible and interactive e-learning material (case studies) for an undergraduate course focused on Human Nutritional Toxicology (Life Sci 3N03) with a student perspective.

This project, although still in its planning stages, is set to start in September of 2018. The student partner will work closely with Dr. Veronica Rodriguez Moncalvo and engage in the following activities:
- Selection of appropriate background information/sources to create two cases studies on iron-related diseases (1) thalassemia, and 2) iron refractory iron deficiency anemia)
- Development of powerpoint slides for each of the two case studies
- Using and troubleshooting appropriate software (e.g. Articulate Storyline, or Adobe Captivate software) to develop accessible and interactive e-learning material
- Generating effective student survey that will serve to: 1) assess effectiveness of the e-learning modules, and 2) compile student feedback for development of future modules on other metal-related disorders such as those involving de-regulation of copper and zinc).
- Weekly meetings with Dr. Rodriguez Moncalvo to discuss resources, module progress, and accuracy of module content

We anticipate that this project will involve approximately 60-75 hours of work. (Please note that this is only an estimate. A more precise approximation of hours will be provided to successful applicants before they begin.)

Applicants should be 3rd, 4th, or 5th year undergraduate students.

**Graduate Student Communications Workshop Series**

In the academic year of 2018-2019, the School of Graduate Studies will be hosting a series of 4 communications workshops per semester for graduate students to support them in effectively communicating their research. The workshops will be designed to come alongside students through the various stages of working on an MA or PhD, teaching skills to help them achieve their goals. Some potential workshop topics include: Diagramming your Research, Writing a Literature Review, Preparing Effective Conference Presentations, etc. This is a new project whose goals include increasing graduate students' academic confidence and skills in the area of communication, faster program completion times, and community building. Graduate students with a demonstrated fluency in communication in academic English are being sought to help with this
project, and would be asked to contribute to the development of content for each workshop (ie: doing relevant literature review/research, helping develop print material/handouts and slides, etc.). Students could also be involved in suggesting new workshop topics, as well as in the presentation of the material, and would be mentored in relevant workshop presentation and communication/teaching skills. Being part of this project would involve meeting with the team weekly, some independent research and content development (as delegated within the team) and practicing as well as taking part in workshop presentations (to groups of 15-50 graduate students) as a team.

We anticipate that this project will involve approximately 35-50 hours of work. *(Please note that this is only an estimate. A more precise approximation of hours will be provided to successful applicants before they begin.)*

Applicants should be graduate students (of any level).

**Impact Project**

The IMPACT Project is a co-designed educational initiative of Drs. Fleisig, Kajiura and Vrkljan. Since 2013, students from Engineering, Science and Health Sciences have designed innovative assistive devices for community clients. In past years, this work has been featured in the Globe and Mail and the CBC. The goal of our research work is to identify the specific benefits of this novel form of project-based learning for each of the participant groups, based on several years of data.

The proposed SPP project will help us develop new methods for assessing design learning. We are seeking partners who could:

- Conduct a literature review of the current best practices for assessing design learning
- In collaboration with professors, develop candidate rubrics/techniques
- Run a focus group to test new assessment techniques for student design projects
- Summarize findings for publication

Student partners would be active participants in developing the dissemination strategy for this work and could be co-authors if they wish. This is likely to lead to a Canadian Engineering Education Association (or similar) paper.

We anticipate that this project will involve approximately 85-100 hours of work. *(Please note that this is only an estimate. A more precise approximation of hours will be provided to successful applicants before they begin.)*

Applicants should be undergraduate students of any level.

**Improving Access to Field Education for Equity Seeking Students**

This project seeks to improve the experience of field education in social work for students from equity seeking groups including Indigenous, racialized, LGBTQ, students experiencing disability/mental health stuff (and the multitude of intersectional identities therein). The project team has been working on a study to better understand how to improve the educational
experiences of equity seeking students. The information collected has offered a number of ideas for tools and resources aimed at supporting students and Field Instructors. Some of these tools include handouts, educational videos, opportunities to engage students in peer discussions and more. We are hoping to engage two Student Partners who would support the team in two ways: 1) helping to plan a ‘Field Forum’ – an opportunity for students, Field Instructors and faculty to respond to the data we’ve got and collectively plan next steps and 2) design and implement those next steps. The Project Team consists of: Janice Chaplin, Jennie Vengris, Randy Jackson and Alise DeBie – all from the School of Social Work. We are looking for students who are creative, social justice oriented, organized and are committed to implementing mechanisms to improve the conditions of field education for equity seeking students. Students will be asked to participate in a range of activities including planning, co-facilitation and designing educational tools (both video and ‘paper’).

We anticipate that this project will involve approximately 85-100 hours of work. *Please note that this is only an estimate. A more precise approximation of hours will be provided to successful applicants before they begin.*

Applicants should be 3rd, 4th, or 5th year undergraduates or graduate students of any level.

**Investigating the Impact of Integrated Learning in First-Year Engineering**

This study intends to evaluate the impact that a broad fields integrated learning course has on students development and perception of both technical skills and non-technical skills. The project is motivated by three factors: 1) exposing students to problems of an interdisciplinary nature that reflect the real-world, 2) a desire to strengthen the practical skills of our students, better preparing them for life after graduation, and 3) consideration for broader application of integrated learning across the entire Level 1 Engineering curriculum.

The proposed study will rely on two primary modes of data collection: in-course assessments and student surveys. In-course assessment of technical skills includes specific summative assessments for both computing and graphics design. Student surveys will target students in first-year engineering. These surveys are intended to explore students’ perceptions of their effectiveness and level of comfort in a number of areas, both technical and non-technical.

At this time, student surveys have been collected for the 2017-18 academic year. The role of the student partner for the upcoming year will include analysis of the previous survey data, writing and proofing abstracts for submissions to engineering education conferences, and finally, administering and collecting survey and academic data for the 2018-19 academic year.

There also exists an opportunity to contribute towards curricular development that further enhances an integrated approach to learning through the development of online web modules.

The ideal student partner will have strong communication skills (both oral and written). Experience with one or more of the following is desirable: statistical analysis, programming in Python, solid modelling in Autodesk Inventor and/or Camtasia video editing software (or similar).
We anticipate that this project will involve approximately 110-125 hours of work. *(Please note that this is only an estimate. A more precise approximation of hours will be provided to successful applicants before they begin.)*

Applicants should be 3rd, 4th, or 5th year undergraduates or Masters students.

**McMaster Child and Youth (MCYU) in the City Facilitator Training Study**

MCYU in the City is an extracurricular community outreach initiative in its fifth year that engages youth in education in Hamilton's priority neighbourhoods. MCYU in the City student facilitators are McMaster students who volunteer to work in interdisciplinary teams to develop inquiry based workshops on topics of relevance to the community. Facilitators present their workshops to students in grades 3-10 in schools, libraries and afterschool programs. Our (Beth Levinson, Dr. Erin Allard and Dr. Elliot Storm from MacPherson Institute and Dr. Sandy Raha from the Faculty of Health Science) goal for the upcoming school year is to evaluate the impact of the facilitator-training program offered through MacPherson Institute. We are looking for two Student Partners to start this Fall to help in: 1) administering facilitator surveys and focus groups, 2) extracting and analyzing survey data, 3) coding qualitative data, and 4) writing a report regarding the research findings. Ideally, partners will commit to 5 hours of work/week until the end of April. Research experience, organization, and project management skills will be an asset.

We anticipate that this project will involve approximately 60-75 hours of work. *(Please note that this is only an estimate. A more precise approximation of hours will be provided to successful applicants before they begin.)*

Applicants should be 3rd, 4th, or 5th year undergraduates or graduate students of any level.

**Nursing Graduate Program Curriculum Review and Renewal – Phase 2**

The overall goal of our project is to provide recommendations for revitalizing the curricula for the Master's and PhD streams of the Nursing Graduate Program to ensure provision of a curriculum that prepares nurses at an advanced level to meet the dynamic and complex health and health service needs of people, families, communities, organizations and the broader healthcare system, now and into the future. Our Curriculum Committee has recently completed Phase 1 of our project, which included a review of our current state and an extensive literature review to examine best practices for graduate nursing education. We have engaged students, alumni, faculty and stakeholders to determine program quality and outcomes, and identify future directions. We have also begun curriculum concept mapping. We are looking for a graduate level student to work with the committee to assist us we move forward with Curriculum Design and alignment of core concepts in our streams, and the development of new courses if necessary. We will also work to ensure our teaching methods meet the needs of students.

We anticipate that this project will involve approximately 135-150 hours of work. *(Please note that this is only an estimate. A more precise approximation of hours will be provided to successful applicants before they begin.)*
Applicants should be graduate students (of any level).

One Week, Many Ripples: Measuring the Impacts of the McMaster Fall Break on Stress in Undergraduate Students

Canadian post-secondary institutions are increasingly introducing a fall break into their term calendars, in response to both empirical research as well as popular media reports indicating a sharp increase in the stress levels of undergraduate students. In 2015, a full-week fall break was introduced at McMaster University in order to improve academic performance and mental health and well-being among students. Surprisingly, however, there remains limited published research investigating whether implementation of a fall break meets the intended aim to reduce student stress and improve overall student mental health. A longitudinal, mixed-methods research project exploring students' experience of the fall break has been conducted during each Fall term from 2015-2017, and we invite students to partner with the research team on this ongoing project exploring the impact of the fall break on student stress and academic performance. The student partner will work closely with Dr. Heather Poole, Dr. Michael Agnew, and Dr. Ayesha Khan on the project, and responsibilities will include designing and administering online surveys; coordinating participant recruitment strategies; facilitating focus group sessions; coding and analyzing survey data, and literature review. As part of this research partnership, the student will also have the opportunity to disseminate their research findings through academic conference presentations, as well as co-authored research papers.

We anticipate that this project will involve approximately 85-100 hours of work. (Please note that this is only an estimate. A more precise approximation of hours will be provided to successful applicants before they begin.)

Applicants should be graduate students (of any level).

Pedagogical Benefits of Engineering Design Software to Improve Students’ Understanding of Theory and Promote Development of Soft Skills

This project aims to continue investigating undergraduate student experiences of group work. Building on a pilot project and 1-year of Leadership in Teaching and Learning Fellowship support, we seek to continue collecting and analyzing data on student experiences of group work over multiple years and courses. Students or alumni involved in this project will facilitate an online survey, analyze data, facilitate participant incentives, and co-author a third paper from this new data. This project brings together interdisciplinary perspectives from Engineer, Anthropology, and Management within the School of Engineering Practice & Technology.

We anticipate that this project will involve approximately 35-50 hours of work. (Please note that this is only an estimate. A more precise approximation of hours will be provided to successful applicants before they begin.)

Applicants should be Masters students.
Qtopia
We propose an application whereby students can input questions at any point during lecture and rank their peers’ questions based on perceived importance. The collected questions are then clustered into sets of related groups, in order to decrease redundancy and gain higher insight into the students’ learning patterns and help mitigate the negative effects of large classroom sizes on the instructor’s ability to answer a large number of meaningfully distinct and pertinent questions. It also allows the students to anonymously participate in class discussion within a traditional lecture and to ask questions throughout viewing of pre-recorded lectures. In addition, questions that students previously asked throughout the course and questions that the student ranked as important are stored within their personal accounts.

We are currently conducting a survey to validate the accuracy of the application, which we would like to continue onto the summer term, in order to pilot the application the Winter Semester. The collected data will be used to implement natural language processing methods which that make use of supervised machine learning, to identify additional semantic and statistical data from questions. In addition, we would like to collect user experience data to identify the analytical tools that best serve our user’s needs.

This application was originally created using Elm, Haskell and Python. However, the final version of the application will need to be written in a more scalable web based framework, in this case most likely Node.js/Express/React. Coding the web app will be one of the primary tasks moving forward. In addition, we will be integrating this system into existing video lecture platforms.

We anticipate that this project will involve approximately 60-75 hours of work. (Please note that this is only an estimate. A more precise approximation of hours will be provided to successful applicants before they begin.)

Applicants should be 3rd, 4th, or 5th year undergraduates or Masters students.

Student Curriculum Consultant (2018 IQAP)
Several undergraduate and graduate programs are scheduled to undergo a program review over the 2018/19 IQAP cyclical year and would like to form a partnership this term with one student in co-creating the program’s self study. As a student curriculum consultant, the student will work with faculty to ensure student perspectives are included in the self-study document. The goal of this collective self-reflexion is to create a self study document that reflects student experience. It will also give the student partner a valuable professional experience, relevant to all students interested in teaching and learning, Higher Education and administrative positions in academia or government. Amy Gullage (MacPherson) is looking for students who have familiarity with at least one program scheduled to be reviewed (IQAP Cyclical Review Schedule), either as a former student of the program or as a Teaching Assistant. Required skills include: leadership, team-work, good social skills, interest in the community involvement, good time management skills, pedagogical interests, analysis skills.
Required application information: Student applicants must specify with what program they would like to partner. Please refer to schedule link above to see what programs are being reviewed.

We anticipate that this project will involve approximately 35-50 hours of work. (Please note that this is only an estimate. A more precise approximation of hours will be provided to successful applicants before they begin.)

Applicants should be graduate students (of any level).

Teaching and Learning Certificates of Completion Earners: Follow-Up
In 2015, the MacPherson Institute (MI) launched the Teaching and Learning Certificates of Completion program for McMaster graduate students and postdocs. In an effort to evaluate the program and document its impact, Dr. Erin Allard (MI) collected survey data from participants before (pre) and after (post) they earned a certificate of completion. She also conducted a focus group with a small sample of earners regarding their experiences in the program, with a goal of making program improvements. With recommended improvements made, Erin is now seeking a Student Partner to assist in conducting a two-part follow up study regarding program earners (n = 219). The goals of the research are: (1) to use publicly available information (e.g., LinkedIn, university websites) to identify the percentage of earners engaged in teaching-related post-program employment compared to the percentage who reported wanting to do so in the post survey, and (2) to complement the pre and post surveys by administering a follow-up survey to the subset of earners who are at least one year post completion. This survey will examine the persistence of earners’ confidence in their abilities to do the program-level intended learning outcomes and fulfill various teaching roles (i.e., TA, guest lecturer, and course instructor), with open ended questions to follow for additional information. In both studies, attention will be given to tracking any teaching that earners have done at McMaster. Ideally, the partner will be a 2018/19 graduate student who has experience conducting online searches and literature searches, writing literature reviews, completing McMaster Research Ethics Board applications, designing surveys, analyzing qualitative data, and writing up research findings. They should also be organized and detail-oriented. The project will begin in September, 2018 and require the partner’s support until the end of April, 2019.

We anticipate that this project will involve approximately 110-125 hours of work. (Please note that this is only an estimate. A more precise approximation of hours will be provided to successful applicants before they begin.)

Applicants should be graduate students (of any level).

Use of Virtual Simulation in BScN Professional Practice Courses
The goal of this project is to explore how virtual simulations in nursing (VSN) can be used within the BScN program to support student learning within the professional practice (clinical) setting. Opportunities exist for VSN to be integrated into clinical skills labs in levels 1 – 4 of the program, as a support / replacement for short periods of missed clinical time, or as a resource for students requiring re-integration or remediation in the program. As a new initiative within the School of
Nursing, the following steps would be required to determine the best approach for integrating VSN into the current curriculum: (1) review of the current literature/practices related to virtual simulation in nursing and health science programs, (2) trialing the various VSN products available, (3) reviewing the current curriculum and working with level/stream leads to determine how virtual simulation could enhance each level, (4) working with leads and clinical lab faculty to determine role of VSN for missed clinical time/reintegration/remediation processes, (5) piloting VSN activities with current students, and (6) disseminating the findings within the School of Nursing, McMaster University, and the nursing education community. Students involved in the project should be in levels 3 or 4 of the BScN program and comfortable with using technology.

We anticipate that this project will involve approximately 35-50 hours of work. (Please note that this is only an estimate. A more precise approximation of hours will be provided to successful applicants before they begin.)

Applicants should be 3rd, 4th, or 5th year undergraduate students.

Additional Opportunity: Student Partners Initiatives Research, Support & Development
In Fall/Winter 2018-19, we are also looking for students to take up flexible positions that will support and contribute to the MacPherson Institute’s work on student-faculty partnerships in a range of ways. First and foremost, the student(s) taking up these positions will work with members of the Research team at MacPherson to develop materials and projects that will enhance the student partners program, and other partnership-relevant work carried out at McMaster. This might entail the development of additional resources and activities (e.g., further training opportunities for students, more chances for students to connect across projects, greater publicity of students’ work with MacPherson, etc.), or contributing to the design and development of new partnership initiatives that complement the current student partners program. It might also involve helping to expand and develop our growing program of research on student-staff partnerships, including further research on the efficacy of the student partners program itself.

We anticipate that these positions will involve approximately 60-75 hours of work. (Please note that this is only an estimate. A more precise approximation of hours will be provided to successful applicants before they begin.)

Undergraduate and graduate students of all levels are welcome to apply.

You will not need to write an interest statement for this final opportunity, but will be asked to indicate whether you’d like to be considered for this position should we not be able to offer you a spot on one of the other projects for which you’ve applied.