MacPherson Student Partners Posting – Summer 2019

In 2013-14, the Arts & Science Program and the MacPherson Institute (then known as MIIETL) 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 Summer 2019. 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 between 25-100 hours of paid work, between May and August 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 from your resume, using the following application form: tinyurl.com/SPPSummer19

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 1 April 2019 at 4:30 p.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: Summer 2019

Advancing Affordable and Supportive Housing Policy and Infrastructure
This project aims to work with Student Partners from the Faculty of Engineering and the School of Social Work to begin developing a conceptual framework for how these two disciplines could foster a partnership. The outcome of this project is to explore ways the Faculty of Engineering and the Faculty of Social Sciences could collaborate on advancing affordable and supportive housing policy and infrastructure. The School of Social Work and the Faculty of Engineering at McMaster University share similar commitments to community-engaged scholarship and experiential learning. As Engineering is preparing to offer the McMaster Grand Challenges Scholar Program and the School of Social Work is focusing on strengthening the study of social policy and social change, the time for cross disciplinary work is optimal. Student partners will work on mapping out pathways for collaboration, student learning and identifying the assets each discipline bring to problem solving around affordable and supportive housing development.

Students will work together under the supervision of Arlene Fajutrao Dosen (Director, Outreach and Engagement, Faculty of Engineering); Mary Vaccaro (Coordinator of Splane Social Policy Initiative, Faculty of Social Sciences); and Beth Levinson, Experiential Educational Developer, MacPherson Institute. Student partners will be motivated to apply their skills and knowledge to the housing sector in Hamilton. Student partners will conduct environmental scans and literature reviews, develop content for knowledge translation, and build collaborative relationships with community partners.

We anticipate that this project will involve approximately 51-75 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 students of any level are welcome to apply.

Articulating the Society, Culture and Religion Program
The goal of this project is to give prospective students, teachers, and community members a sense of the Society, Culture and Religion program in the Social Sciences by creating accessible video resources and exercises for use in Social Sciences 1T03 and potentially on the program website. Social Sciences 1T03 is a first-year course aimed at building transferable skills and improving ‘undeclared’ Social Science students’ understanding of their program options. Given the relaunching of the former ‘Religious Studies’ program as the ‘Society, Culture and Religion’ program, new resources are needed not only within the 1T03 course, but in the Social Sciences academic community (and in the wider secondary teaching and learning community) in order to address common misconceptions and highlight the academic, personal and career possibilities in the interdisciplinary social sciences study of religion, culture, and society.

The tangible outcomes of the project could include accessible ‘explainer’ videos on the program and/or career goals, as well as one or more ‘sample lesson videos’ accompanied by complementary discussion activities or active learning exercises. These materials, which are open to collaborative conception and design, would be used in 1T03 but also potentially available online for use by high
school teachers wanting to provide accurate insight into what teaching and learning is like in the Society, Culture, and Religion program.

We anticipate that this project will involve approximately 51-75 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 students of any level or PhD students are welcome to apply.

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**Bridging the Gap: Using Science Communication to Effectively Engage Youth and to Facilitate their Transition into Higher Education**

Every year, thousands of youth take the campus tour, and attend the McMaster Fall Preview and Open House events to have a glimpse of what university life is all about. McMaster prides itself on being Canada’s most research-intensive university yet the emphasis on research appears to be underrepresented in the events for prospective students. The goal of this proposed project is to develop a repertoire of versatile youth-friendly education modules for the ARiEAL Research Centre. ARiEAL is an interdisciplinary research centre with recognized excellence in experimental and applied research methods, behavioural and neurophysiological approaches to linguistics, language, cognition, and cognitive neuroscience. Our membership includes faculty members from Engineering, Health Sciences, Humanities, Social Sciences and Science. We are uniquely positioned to attract youth who are still exploring what university education offers and what their passion might be. We are seeking help from two Student Partners, one graduate and one undergraduate, preferably with science communication skills and experiences working with youth. The Student Partners will work primarily with Ms. Chia-Yu Lin, Manager in Development & Research, at ARiEAL, and Dr. John Connolly, the Director at ARiEAL. The students are expected to also work with individual ARiEAL researchers to gain a better understanding of their respective knowledge bases, before the Student Partners team up to package the research knowledge in a youth-friendly manner. The expected deliverables are educational modules in various formats (e.g., presentation slides, experiment demonstration, hands-on activities etc.) for various laboratories within ARiEAL that could be adopted for future visiting youth.

We anticipate that this project will involve approximately 51-75 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.

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**Constructive Alignment Lab Overhaul for Fluid Mechanics and Heat Transfer (ENGPHYS 3004)**

Recently ENGPHYS 2E04 (analog & digital circuits) went through a constructive alignment overhaul which transformed it from a traditional delivery format for an electronics course (a midterm & final exam, assignments, and lab reports) into a new much more aligned format. Since the ILOs are to understand and solve circuits analytically, with simulation software, and by building and measuring
them, the traditional format ends up mostly measuring the first ILO only, having the next 2 only assessed through minor assignments and not doing a good job to link the topics together. In order to truly have an aligned course enhanced with experiential and problem-based learning, 2E went through a redesign that made the lab topics the same as the lecture topics, delivered via blended learning with in-person and video lectures, and tested individually each Monday followed by a lab on the same topic every week where students solve circuits using all three ILOs at once, seamlessly merging them together and leading to greatly enhanced student learning and enjoyment (Compared to a control group, students improved their performance from 82% on a separate standardized circuits test to 91% with the new format).

This proposal is to apply the same techniques to a different course which at the surface is much harder to bring into alignment and no one in the world has attempted to teach in this way: Fluid Mechanics and Heat Transfer. Can the labs in this topic be delivered with the same application of best practices in teaching and learning, and lead to a similar measurable improvement in student performance? With your help, the answer is yes.

We anticipate that this project will involve approximately 76-100 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.

Developing a Course Worth Credit for Extracurricular Involvement in Student Groups
The goal of this project is to develop an Experiential Learning course for engineering students to earn course credit for their non-technical contributions on student societies or groups, through the development of a Learning Portfolio. To ensure this course most appropriately suits the needs and goals of a diverse student population, we are seeking a Student Partner to assist in the co-creation of this course.

The type of work involved will likely include: researching existing best practices for course development, recruiting guest speakers, developing assessment criteria, developing appropriate teaching techniques and modules, developing a research ethics protocol, and dissemination of the work. This course will be offered in the 2019 Fall term. We have already conducted several focus groups, and are currently processing the data to highlight key student considerations. Next, we will be putting together a course outline, and collecting feedback to ensure the course aligns with student needs. It will be developed and taught by Dr. Stephen Mattucci, a Postdoctoral Fellow in Engineering Education, and supported by Dr. Ken Coley, Engineering Associate Dean Academic. Since we are in developmental stages we realize that many different skill sets can likely be utilized to develop this course, so we encourage anyone with a strong interest in experiential learning, and development of professional skills to apply. However, we imagine certain skills and experiences will be particularly useful, including:

- History of continued engagement with extracurricular engineering student groups and societies
- Social sciences background with experience developing and analyzing qualitative survey and focus group data
- Educational background (i.e. completed an ISW), and interest in developing a student-centered course
- Meeting with key representatives from clubs and teams to determine alignment with the course
- Recruiting guest speakers and student mentors based on student feedback to play a role during in-class activities
- Developing a research ethics protocols for collecting data from students when the course begins in the fall.

We anticipate that this project will involve approximately 25-50 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.

**Developing a Fourth-Year Laboratory Course for Life Science Students Registered in the Origin of Disease Specialization**

The central goal of this project, which is in its planning stages, is to develop a meaningful capstone inquiry laboratory experience for fourth year life science students enrolled in the origin of disease specialization (OD) of the Honours Life Sciences program. This interdisciplinary program examines the chemical and physical basis of cell function, disease states, and current research in disease prevention and treatment. The OD specialization was created in partnership with the Departments of Chemistry & Chemical Biology and Physics & Astronomy. It is important to mention that Honours Life Science program is the program with the largest enrollment in the Faculty of Science. Thus, this specialization was also created with limited enrollment to provide smaller cohort experiences for students interested in research in human disorders and considering health-care based professional programs.

We are recruiting a student partner with laboratory experience, including members of equity-seeking groups. The student partner will work closely with Dr. Verónica Rodriguez Moncalvo and Ryan Belowitz, the laboratory Instructional Assistant for the Life Sciences Program, to provide a student perspective during the planning and designing of this laboratory course.

We anticipate that this project will involve approximately 51-75 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.

**Does Faculty Diversity Matter in the Student Learning Experience?**

The purpose of this project is to work with a student partner who is interested in the topic of diversity and inclusion as it relates to the student learning experience. Specifically, do students expect faculty/instructor demographics to reflect the diversity present in the student body, and do
students consider this a criterion for an effective teaching and learning experience? While the focus of the project will be refined in collaboration with the student partner, there is the opportunity to develop a scoping review on this topic: whether students believe that diversity in higher education faculty is necessary for effective learning and a positive student experience. The project will involve regular (in-person and online) meetings and students must be self-directed and interested in exploring this topic further in the literature. Experience with conducting systematic literature reviews, and ability to synthesize literature findings in writing is an asset.

We anticipate that this project will involve approximately 25-50 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 Masters students.

**Graduate Writing and Communications Workshop Series: Knowledge Translation**

Over the past 8 months, a group of graduate student partners has worked with the Graduate Student Writing Consultant to put on writing and communications based workshops for McMaster graduate students across disciplines. Topics have included Conference Presentations, Writing a Literature Review, Becoming a Better Editor of your own Work, An Introduction to Graduate Level Communications and more. Over the summer term, student partners are being sought to translate the materiel and research dedicated to these one-time workshops into resources that can be accessed online by graduate students for the longer term. This could include the creation of online modules, handouts, a web page of resources for graduate students, or any other form the team agrees upon. Students involved in this project would work with the graduate student writing consultant to translate previously presented workshop content into accessible print, digital or online writing resources.

We anticipate that this project will involve approximately 51-75 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.)*

Graduate students of any level are welcome to apply.

**Heritage Languages - Experiential Learning**

Together with Dr. Wendy D’Angelo, we have been working on a new Level IV experiential learning course in Linguistics for students in Humanities at McMaster. In this experiential learning course, students will engage with local community partners to study heritage language related needs and to record linguistic history or the area, both in terms of the First Nations history and the identity formation among immigrants to Hamilton and the region. Students will use interviews, historical archives and other ethnographic tools. We have received some ELAP funding (for recording equipment) and are planning to offer the course in 2020-21 after it is passed through the curriculum committee in the Fall 2019.

We would like to work together with two Student Partners to identify community needs specific to the Hamilton area and establish relationships with relevant community partners whom we would
like to consult about societal needs that are related to community groups speaking their heritage languages. We will be seeking partners who can help us assess the ways the project could benefit heritage language speakers and ethnic communities at large. We would like to prepare a number of topics so that every year the course could focus on a specific project, working with the community on well-defined language related tasks.

We anticipate that this project will involve approximately 51-75 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

**Horizontal Curriculum Integration in a Biology Program**

Most basic science instruction at postsecondary institutes is typically done as stand-alone courses where within a given course, students are taught a view of the parts, but not the whole of how interconnected principles underlie scientific phenomena. The primary objective of this project will be to investigate the impact of cross-over assignments between courses on the ability of students to apply and transfer concepts between courses at the program level. At the same time, a secondary interest of this project is to investigate the psychosocial impact that a reduced assignment load may have on student performance and overall stress perception. As a pilot project, we will investigate how the this pedagogical intervention may both facilitate concept integration across courses within the Molecular Biology & Genetics and Physiology programs in the Department of Biology while at the same time reduce student stress.

The research team will benefit greatly by establishing collaborations and gaining perspective from Student Partners who are either enrolled in the Molecular Biology & Genetics program or students who are enrolled in the Physiology program in the Department of Biology. We also welcome the application of potential Student Partners who have completed a large number of required courses from either of these programs and who are in their 3rd year of academic study at McMaster. Our research team is committed to equity and diversity within our team. We strongly encourage applications from women, persons with disabilities, First Nations, Metis and Inuit persons, members of racialized communities and LGBTQ-identified persons.

Student partners will work with project leads Rosa da Silva, Alastair Tracey, Robin Cameron (Biology) and Abeer Siddiqui (Learning Support Librarian) towards the planning and implementation of this 2-year project. This will include but is not limited to: ethics applications, program learning outcome analyses, cross-over assignment design, implementation and project management, survey construction and launch, together with data analysis and interpretation.

We anticipate that this project will involve approximately 51-75 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 enrolled in either the Molecular Biology & Genetics program or the Physiology program in the Department of Biology. We also welcome the application of potential
Student Partners who have completed a large number of required courses from either of these programs and who are in their 3rd year of academic study at McMaster.

Hormonal Cycle App: Developing a Novel Teaching and Research Tool in McMaster’s Kinesiology Department

Recently, government and external advocacy organizations, such as the Heart and Stroke Foundation, have recognized how women are understudied in cardiovascular health research. A commonly cited challenge associated with studying women in physiology research studies is the integration of complex hormonal cycles associated with the menstrual cycle or hormonal contraceptive use (ex. oral contraceptive pills, transdermal patch, vaginal ring...etc.). However, Dr. Maureen MacDonald, the lead investigator of the Vascular Dynamics Lab at McMaster University, has spearheaded studies bridging this research gap, studying the impact of hormonal cycles on physiology in women. Recognizing that this challenge of considering women’s hormonal cycles often poses a barrier for human physiology labs and researchers to integrate female participants into studies, our lab is designing a software application which would allow for participants to log menstrual/hormonal contraceptive cycle information communicating to researchers to assist them in determining the optimal time in their cycle for testing. The overall aim of this app is to simplify the process of assessing hormonal cycles and hopefully increase accessibility of including women in human research studies.

Student Partner (SP) Role: We are looking for a student partner to work with us on the design of the app, working in direct contact with a PhD student leading this project. The partner would be involved in the initial development of the app, starting from running focus group discussions and interviews with graduate students and Faculty in the Kinesiology department to understand the needs of current researchers, and ultimately in the design of app features. No technical computer/programming skills are needed – just an interest in the project and an eagerness to contribute in the design.

We anticipate that this project will involve approximately 51-75 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.

Improving how First Year Students Learn Spanish and Italian Sentence Structure

Based on empirical evidence collected from language students at McMaster, the final phase of this project involves translating the outcomes and discovered learner variables that affect language learning. Specifically, the project examines the issues that students in first year Spanish and Italian language courses have with difficult and complicated sentence structures. The project involves determining which linguistic qualities deserve certain attention for groups of learners with overlapping individual differences. This aspect will involve examining linguistic data and collaborative discussion with the research team. After the linguistic qualities are identified from previous results, partners will help to develop the pre- and post-test material as well as the intervention material developed to enhance the intake of our selected linguistic qualities. The
results of this project will be shared with the language instructors with suggestions for facilitating effective learning of Spanish and Italian sentence structures. The project is set to begin over the summer term of 2019 working with the primary student investigator, Chelsea Whitwell, and the faculty supervisor, Dr. Elisabet Service. Students should have experience with Microsoft Excel and have basic course experience in linguistics or psychology (e.g., LING 1AA3). Previous experience in a university language class is an asset.

We anticipate that this project will involve approximately 25-50 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.

**Improving Women’s Reproductive Care Outcomes with Comprehensive Family Planning for Midwives**

Every year in Pakistan, over 4 million pregnancies are unintended and about 25% of those are terminated through induced abortion, many of which are clandestine. As the perinatal care provider, midwives would benefit from evidence-based knowledge and skills to facilitate access to family planning, safe abortion and post-abortion care, which in turn will improve lives of women and decrease demands on the health system. Our team, led by Drs. Eileen Hutton and Karyn Kaufman at McMaster University, is addressing this challenge by creating an accessible, interactive and informative eBook and training module on family planning and post-abortion care for midwives in Pakistan.

The review of relevant materials and drafts of chapters of the eBook are nearing completion; therefore, the student will mainly be involved in the exciting production of audio, video and other enhanced graphic visuals that will be incorporated into the eBook. Most importantly, the student will have the opportunity to create the layout using innovative software. With this in consideration, a student with the ability to speak and write Urdu is strongly encouraged to join our team, as some material will be translated into Urdu. Having current knowledge about reproductive physiology and anatomy, family planning methods, and post-abortion care will assist the student to rapidly understand and assist the editing of materials during the production phase. The student will be reviewing edits and add content as needed. The ability to write and edit drafts is necessary. Lived experience of Pakistani cultural norms and practices is also an asset.

We anticipate that this project will involve approximately 51-75 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.

**Integrating Course Materials in an Online Portal (Top Hat)**

The main goal of this project is to finish integrating the Beginner’s German Language course German 1Z06 into the interactive educational platform Top Hat which allows students to actively
participate in the lectures by using their laptops or smart devices and can host an online workbook for the course.

The successful student partner will collaborate with the instructor on migrating the existing resources into the Top Hat interface and will help making strategic decisions that affect the structure of the course and the way the materials are laid out in Top Hat. A student partner will help to ensure that the materials have been transferred in their entirety, and will collaborate in finding ways to improve the materials’ accessibility, saliency, as well how to give them a more straightforward and logical structure. The Student Partner will also be involved in transferring the interactive online textbook into the software, modifying the existing and creating new exercises, compiling word lists, and re-shaping grammar descriptions and charts.

Elementary proficiency in German language and basic experience with word processing software are required. Please note that no programming skills are required for this project.

We anticipate that this project will involve approximately 51-75 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 students of any level are welcome to apply.

**Interactive e-Learning Modules for Bioinformatics**

The incentive of the given project is to develop interactive e-Learning modules for BIO 3S03 - Bioinformatics. The course is run in the fall semester and is based on concepts, techniques, and applications of an emerging field of Computational Biology. Usually, the course curriculum is not followed to completion, since due to the novelty of the information, students require more time to apprehend and excel at understanding of presented concepts. A part of the course material is database utilization, file format comprehension and conversion, and terminology knowledge, which, despite being taught in lecture, could be independently learned by students, allowing more time for in-class discussions, questions, and more covered content. Current online tutorials available on the net are not specific to the course curriculum, and do not allow for immediate application of content. In brief, students will be required to write a script for module narration, design four 15-minute-long modules using Articulate Storyline software (similar platform outlook to Microsoft PowerPoint), and voice-record the modules. The project is supervised by Dr. Brian Golding, and Student Partners will have weekly meetings to discuss and reflect on the progress and consider future directions. BIO 3S03 student collaborators are highly encouraged to apply, however, others with experience in the field of bioinformatics and the course are also welcomed.

We anticipate that this project will involve approximately 51-75 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.
Level 2 Lab Redesign
Our Level 2 chemistry and chembio students take identical lectures but have drastically different lab experiences. The purpose of this project is to re-design our level 2 laboratory curriculum so that: (1) the two groups of students are united and their perceived inequality is reduced; (2) both groups have access to research-grade equipment and exposure to problem solving and experimental design.

The project is currently underway as the labs are set to begin in September 2019. We have three main tasks to be completed by September 2019: (A) creating online tutorials to highlight methods, instruments, and data analysis in analytical chemistry; (B) testing and troubleshooting new experiments; (C) developing inquiry or guided-inquiry protocols for students.

The incoming student partners would liaise with the current student partners (Harry Lu, Rebecca Hum, Shanu Xavier) and myself (Sharonna Greenberg), and we would be collaborating with the level 2 laboratory departmental committee (including faculty and staff), and report our progress to the department.

We are seeking 3-4 students in chemistry or chemical biology. The students could have finished Level 2, 3, 4 or 5, they could be graduate students who completed chemistry or chemical biology in their undergrad, or they could have TAed for Chem 2LA3, Chembio 2OA3/2OB3, or Chembio 2AA3.

We anticipate that this project will involve approximately 25-50 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 undergraduate or graduate students of any level.

MacChangers Program Developer
MacChangers is a co-curricular program that provides resources, coaching, and support to interdisciplinary teams of students who propose innovative solutions to issues that impact society both locally and globally. The program runs over the academic year (from September to April). 2018-19 will be our fourth year. The MacChangers program is a partnership between the Faculty of Engineering and the MacPherson Institute.

By applying content knowledge to real-world challenges, program participants develop collaboration, team building and effective communication skills through working with in multi-disciplinary teams. In order to stimulate creative and analytical thinking, the MacChangers staff offer coaching sessions on problem solving, design thinking, project management, inquiry-based learning, community engagement and ethical practices in research involving human participants. MacChangers participants have the opportunity to network and build valuable connections with our partners. Students present their final project to community and campus stakeholders in April.

During the 2018-19 academic year, our program has experienced significant growth both in participation and network. We have doubled our student participation and extended network to include The Mobility Lab and CityLAB. We increased our coaching sessions from once a month to every other Tuesday evening. The Faculty of Engineering has been accepted into the National
Academy of Engineers Global Challenge Scholars Program, making McMaster University the first Canadian university to be a member of this elite program.

Summer Student Partners will be crucial in supporting the program’s focus on better meeting the needs of our participants in terms of research methodology, community engagement, design thinking and creating problem solving. Our student partners will assist us with redesigning our coaching sessions, fostering closer working relationships with our community partners and developing coaching modules. Student participants commit to participation in a year-long extracurricular activity. Project staff: Beth Levinson (MacPherson), Arlene Dosen (Faculty of Engineering)

We anticipate that this project will involve approximately 51-75 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.

Opening up Theory of Translation (LING 3TT3) to Students Outside Linguistics & CogSciL
The Department of Linguistics and Languages has been offering, on irregular basis Translation Theory course (LINGUIST 3TT3) for students registered in Level III or IV of our programs in Linguistics and the Cognitive Science of Language. The enrolment was between 45 and 30 students per year. We believe that the course could be modified and transformed to an open course in order to serve a much broader potential audience.

Linguistics and Cognitive Science of Language are interdisciplinary fields, spanning the area between Science (Psychology, Formal Logic, Acoustics, Computer Science), Social Sciences (Sociolinguistics, Forensic Linguistics, Anthropology) and Humanities (Language and Culture). Theory of Translation traditionally explored translation between natural languages, analysing the impact of cultural and linguistic difference over time. Modern studies of translation also involve computer analysis (machine translation, computer transcription of spoken language, human and computer interface), translation between different modes of representation (e.g. adapting a novel to a screenplay), consecutive and simultaneous conference, medical or court interpretation and many other applications of linguistic theories of translation. We believe that we could attract students from departments such as Computer Science, Film and Theatre, Religious Studies, French, Classics, Philosophy, Health Sciences and possibly more.

We will be proposing changing LING 3TT3 to an open course for students beyond their first year of study. The proposed project will serve as preparation of the modified syllabus by exploring potential interest in other Departments and Faculties so that the course could be of interest to students beyond our own programs.

We anticipate that this project will involve approximately 51-75 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.
Resources for Undergraduate Students Guidebook

This project will invite Student Partners to collaborate with MSU Macademics to develop a MacPherson ‘Guidebook’ similar to the “New Faculty Guide to Teaching & Learning at McMaster” and reflecting the values of Macademics’ “Resource Hub.” The goal of this project will be to complete a guidebook document to be published on the MacPherson Institute website that will provide academic resources to undergraduate students in the context of teaching and learning at McMaster University. Currently, a MacPherson guidebook does not exist for undergraduate students, so student partners will help develop the guidebook through conducting focus groups/online survey, interviews with McMaster faculty and other experts or stakeholders in Hamilton, and researching areas of interest (e.g. pedagogy, campus resources, learning innovations) to compile a thoughtful and student-centered guidebook to be used by undergraduate McMaster students. The guidebook will present an updated collection of evidence-based research, campus information (e.g. library resources and hours), student testimonials, and strategies for students similar to those of the “Teaching Assistant Guide.” Student Partners will work with the MSU Macademics team, most predominantly with service Coordinator, Fairuz Karim. Student Partners will also work with Dr. Michael Agnew, MacPherson Institute Postdoctoral Research Fellow to develop and reiterate project aims throughout the process. All students are welcome to apply for this project. Experience in research, writing, and digital design will be of great use, as will an enthusiasm for resource dissemination and an interest in advocacy for undergraduate student success.

We anticipate that this project will involve approximately 51-75 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

Student Curriculum Consultant (Summer 2019 IQAP)

Several undergraduate and graduate programs are scheduled to undergo a program review over the 2019-20 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 has 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. 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 25-50 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.)

Graduate students of any level are welcome to apply.

The School of Interdisciplinary Science Teaching & Learning Workshop Series
With 1,800 undergraduates, the School of Interdisciplinary Science (SIS) serves the largest fraction of students in the Faculty of Science. Our three programs (Life Sciences, Integrated Science, and Medical Radiation Science) engage students through a curricular approach that incorporates laboratory courses, community engaged assignments, and science communication activities.

Since the School does not offer a graduate program, senior undergraduate students account for the majority of the teaching assistants (roughly 70%) who help implement its lecture and laboratory-based courses.

In the fall of 2019, the School plans to launch a series of workshops that will create a designated space for conversations about teaching and learning. To this end, SIS has partnered with the MacPherson Institute and the Student Education Developer Program to launch a SIS specific teaching and learning series. Our workshops will be open to all SIS students, but they will primarily be oriented towards undergraduate and graduate teaching assistants (TAs), focusing on topics such as [1] professional skills, [2] academic dishonesty, [3] marking and evaluation, and [4] laboratory teaching.

We are recruiting a dynamic student partner who will work closely with SIS faculty (Drs. Ayesha Khan and Verónica Rodriguez Moncalvo), SIS administration (Sarah Robinson), and an education developer from the MacPherson Institute to provide a much needed student perspective during the planning and designing of the teaching and learning workshops. This student partner will primarily organize internal focus groups consisting of undergraduate students, as well as current and former TAs, and they will consult with faculty to understand the School’s unique teaching and learning needs to assist in building the structure and scope of our workshop series.

We anticipate that this project will involve approximately 51-75 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.)

Graduate students of any level are welcome to apply.

Translating Career Education: Decoding and Understanding the Language of Graduate Students
This research project is part of a larger pilot in the Faculty of Science, providing graduate students with career support from the beginning of their program through all stages of their degree to convocation, with a goal of helping students overcome anxiety and a lack of employment readiness.
by developing a strong sense of career self-efficacy. We are seeking a student partner to help us better understand the language that graduate students use to talk about careers, and their communication preferences. Working in collaboration with Catherine Maybrey, the Career Integration Specialist in the Science Career and Cooperative Education office (SCCE), the student partner will conduct a review of graduate student websites, social media, and other sources, leading to preliminary findings and the development of a question set for focus groups. Catherine and the student partner will also connect with Bhagwati Gupta, Associate Dean (Graduate Studies), Ryan Trepanier, Graduate Support Officer, and Jay Robb, Communications Manager, to understand the research topic from multiple perspectives. The Faculty of Science has soft launched workshops for graduate students through partnership with student groups and departments, and is building awareness of the availability of services through weekly drop-in sessions and promotion on social media. Research on the communications question is ready to move forward with the right candidate. Students should be curious, persistent, and creative problem-solvers. They will require strong internet search capabilities, attention to detail, and the ability to organize/categorize qualitative information. The right student partner will listen, but will also make suggestions. Students from any faculty are welcome and invited to apply. Non-science students are encouraged to apply, as they will bring a different perspective to the project.

We anticipate that this project will involve approximately 25-50 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.

Additional Opportunity: Student Partners Initiatives Research, Support & Development
In Summer 2019, 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 51-75 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.