The Centre for Teaching and Learning presents: The 10th Annual
Celebration of Teaching and Faculty Showcase

Monday April 9, 2018 - IC Building
A key to becoming an expert teacher is to have a reflective teaching practice. A Teaching Dossier can assist in developing a reflective teaching practice and is a significant component of tenure, promotion, and teaching award files. This event (open to faculty at all levels of career) will consider the purpose of a dossier and the different components of it. The earlier you start to develop a dossier, the easier the process.

**SCHEDULE FOR THE DAY**

9am - 10:30am – Pre-Conference Workshop

**Developing Your Teaching Dossier – IC120**

*Clare Hasenkampf*, Director, Centre for Teaching and Learning; Professor, Biological Sciences; Associate Dean - Teaching & Learning, UTSC

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10:30am - 10:45pm – Welcome Remarks – IC220

*Clare Hasenkampf*, Director, Centre for Teaching and Learning; Professor, Biological Sciences; Associate Dean - Teaching & Learning, UTSC

10:45am - 12pm – The Affective Politics of Teaching and Learning: From a Pedagogy of Discomfort to Critical Hope - IC220

*Megan Boler*, Professor, OISE, University of Toronto

This plenary talk explores the intersecting affective, emotional, and political dimensions of teaching and learning. How do we integrate social justice aims into diverse curricula--from the humanities, arts, social and natural sciences? What do “social justice” pedagogies look like? How can our work as educators invite students to move outside of their comfort zones, while still meeting “content” expectations--and what are the ethics of such pedagogies? To foreground the often neglected role of emotions and affect in education, this talk outlines a “pedagogy of discomfort” as a means of rethinking cherished values and assumptions, and “critical hope” to offset discomfort. In conclusion, we will discuss how educators can sustain their own compassion and energies given the demands of our intensive emotional and educational labour.

12pm - 1pm – Lunch - IC Atrium
In the next couple of years, the provincial funding model for universities will require institutions to demonstrate that graduates achieve program-level learning outcomes. In preparation for this shift, units at the University of Toronto are being encouraged to proactively clarify their program’s learning outcomes and how their curriculum meets these outcomes. Such curriculum mapping exercises could also spur meaningful discussions surrounding curriculum renewal and restructuring of courses and programs that enhance the student learning experience. The Department of Psychology and Department of Biological Sciences at UTSC have both been engaging in this process during this academic year. In this workshop, we provide a brief overview of how each of our departments have approached this process, including opportunities and challenges. We also hope to engage attendees interested in participating in curriculum mapping initiatives in their own units, in an interactive discussion.

This interactive session invites participants to consider small strategies for supporting mental health in their classrooms. While excellent Mental Health Services exist on our campus, this session seeks to consider what lay instructors, at the interface of the classroom, might do to optimize opportunities for students’ wellbeing. Bringing together multiple perspectives, student-informed strategies, and research-based practices, we consider accessible, linguistically, and culturally responsive small strategies for the classroom.

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c) From Students to Scholars: Inquiries into the Independent Research Project – IC120

Maria Assif, Associate Professor, Teaching Stream, English; Sonja Nikkila, Lecturer, English

Although many of us see the independent research project as the culmination of a successful undergraduate degree, we are encountering increased student anxiety and unpreparedness around these assignments. In this session, we want to use our experiences as teachers and as project advisors — in context with observations on the process from former and current students — to explore our pedagogical tactics and expectations. We intend our workshop to be a conversation about different experiences: What is happening at the D-level, and what are the structures in place at earlier course levels that are preparing — or failing to prepare — students to take on independent, in-depth work? What are some of the strategies used and stumbling blocks encountered when guiding students toward and through the independent project? Ultimately, we are most interested in thinking about stories of success and where we can see hopeful signs for the future of the undergraduate research project.

2pm - 2:15pm – Break - IC Atrium

2:15pm - 3:15pm – Concurrent Sessions II (choose one)

a) Designing Work-Integrated Learning Activities:
A Workshop with Resources to Help You Get Started – IC120

Radhakrishnan Phani, Associate Professor, Teaching Stream OB/HR, Management; Shadi Dalili, Associate Professor, Teaching Stream, Physical and Environmental Sciences / Chemistry

Do you want to design and implement a work-integrated learning project in your course? What support does the University of Toronto have to help faculty with this? How do employers and students react to such projects? These questions will be answered in a cross-disciplinary, hands-on workshop with faculty who have experience with work-integrated learning projects. Participants will have opportunities to design a sample work-integrated learning project.
Facilitators will then give feedback on the issues to think about while designing and implementing the project. Members of on-campus agencies (e.g., Career offices) or off-campus agencies (e.g., RIIPEN) who can help connect you to resources will also be on hand to give feedback for conducting a successful work-integrated learning project. Representatives of organizations who have collaborated with faculty on their work-integrated learning projects and students who have done these projects will also be on hand to give their feedback on what they learned from the projects.

b) The CTL Bookclub Presents:
Our ‘take homes’ from the book, ‘Small Teaching’ by James A Lang. – IC204
Iris Au, Associate Professor, Teaching Stream, Management; Johann Bayer, Associate Professor, Teaching Stream, Physical and Environmental Sciences; Clare Hasenkampf, Director, CTL, Professor, Biological Sciences; Associate Dean – Teaching & Learning, UTSC; Elaine Khoo, English Language Development Centre Coordinator, CTL; Maggie Roberts, Facilitated Study Group Coordinator, CTL; Rachel Sturge, Assistant Professor, Teaching Stream, Biological Sciences; Jack Parkinson, Associate Professor, Teaching Stream, Management

In his book, ‘Small Teaching’ James Lang decided to only consider teaching techniques that had a foundation in learning science, were implementable in real university classrooms and qualify as ‘small teaching’. He defines small teaching as small modifications in course design and communication that of themselves require minimal preparation time and grading. In this workshop we will highlight some of the small changes that can be made in our classes that better align our practices with what is known from learning science. Then we will ask participants to help us develop a list of examples of these practices from our courses.

c) IFCAT: An Immediate Feedback Collaborative Assessment Tool – IC208
Sohee Kang, Assistant Professor, Teaching Stream, Computer and Mathematical Sciences; CTL Math and Statistics Learning Centre, Statistics Coordinator; Brian Harrington, Assistant Professor, Teaching Stream, Computer and Mathematical Sciences.

Despite mounting educational research showing the benefits of collaborative learning, many educators still revert to traditional methods of evaluation. This is particularly true in STEM subjects, where assessment is predominantly in the form of individually written tests, with distinct correct solutions, and binary marking schemes. In order to combat these limitations, we developed IFCAT: a web-based Think-Pair-Share + Immediate Feedback-Assessment Technique testing app. The IFCAT allows an instructor to easily write and send questions to students. Students can then either be assigned to groups randomly (each student’s screen displays a group number) or students can form their own groups. IF-AT feedback (of multiple question types) can then be given, and results can be recorded and monitored. We will share our experience of using IFCAT, statistical evidences of its effectiveness, and finally comments from students.

3:15pm - 3:30pm – Break - IC Atrium
Can first year non-major biology students accurately predict their ability to apply the scientific method? Exploring the correlation between metacognition and discipline-based learning. Shiza Shaikh, Amy Jenne, Ahmed Elbassiouny, Aarushi Bansal and Aarthi Ashok, Biological Sciences

Metacognition is defined as the ability to be aware of one’s own cognitive processes. Metacognitive development is linked to students’ ability to better monitor and regulate their learning and is hence a strong predictor of academic success. The goal of our current study was to explore the correlation between students’ self-reported abilities (indicative of metacognition) and an actual measurement of their abilities using a scored problem. Consistent with previous studies, we find a positive correlation: students with higher confidence ratings are able to accurately apply the scientific method in the scored problem. We further explore the possible factors, including student demographic data, that influence students’ self-reported abilities. The outcomes of this study allow us to understand the factors that influence metacognitive development of first year students, which could be used to create course environments and resources that promote student learning and academic success.

Problems and solutions in designing a neighbourhood-based field research course. Daniel Silver, Sociology

This poster presentation outlines the problems we faced in developing a set of field exercises for a research-intensive course on the sociology of neighborhoods, the solutions we found, and ongoing challenges. The problem was to integrate students’ reading of various theories of neighborhoods with their own first-hand research on Toronto neighborhoods. The solution was a set of field exercises that utilized Toronto as a living laboratory, and progressively built up deep and wide-ranging knowledge by triangulating quantitative, qualitative and spatial data analysis. Students learned to collate government statistics from the census with online business data to produce statistical mappings of the neighbourhood, and compare it to others. They compiled media stories, histories, and literary documents to analyze the cultural representation of a neighbourhood. They engaged in multiple structured personal field observations to observe the street life and activity patterns that characterize the neighbourhood. Interviews with community leaders and ‘old-timers’ revealed neighbourhood history and changing perceptions of its character. Digital photos provided material both for mapping patterns (e.g. in color or signage) and for visual comparisons across neighborhoods (in e.g. architectural style). These observations became meaningful, however, when students synthesized them by testing them against hypotheses drawn from in-class reading and discussion. Going forward, challenges remain, including how to sustain an intensive course like this over time, and permit results from one year to inform those of future years.
Implementation and Evaluation of Peer-Instruction (PI) in Chemistry.

*Nirusha Thavarajah*, Chemistry

In this poster presentation, a mixed method pedagogical research study to investigate the impact of Peer instruction (PI) (Lasry, Mazur & Watkins, 2008) on students’ perception, attitude, and engagement in Introductory chemistry and advanced level organic chemistry will be discussed. PI is an active learning technique widely adopted in many disciplines, which promotes student involvement and interest towards the subject. This technique can be used in conjunction with pedagogical practices such as inverted (Weaver & Sturtevant, 2015) or blended classroom (Williams, 2002), and it can extend beyond the classroom by the usage of online learning platforms such as Blackboard, WebCT and Moodle. In this research study, the implementation of PI in introductory chemistry and third year organic chemistry was investigated using an online Likert scale survey to measure the impact of PI on students’ perception, attitude and engagement. The preliminary quantitative and qualitative results of this study will be discussed in this poster presentation.

Quizzical: A multi-functional on-line multiple-choice question writing, learning, and test practice tool.

*Dan Riggs*, Biological Sciences

Quizzical is a software application that can be deployed within learning management systems (Blackboard, Quercus). An efficient setup page allows first time (and edtech naïve) instructors to quickly navigate options, specify TA assignments, and upload images (e.g. from a textbook/publisher) in less than 15 minutes, making Quizzical a turn key application. Students are asked to author multiple-choice questions using a form filler, and the instructor can specify whether they are to include images, references, and justifications for their answers. Following evaluation (by TA or instructor), approved questions move to a test bank that students can access at any time for learning/test practice. If (textbook) images and full justifications for answers/distractors are employed, testees can use these to solve misconceptions, making Quizzical an efficient learning tool. Students can take quizzes at any time, affording an opportunity to practice in a way that mimics a formal exam situation. End of term course evaluations suggest that students highly value this active learning experience.

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Riipen Experiential Learning in a 4th year Pharmaceutical Chemistry course (CHMD71H).  
*Cindy Walawander* and *Shadi Dalili*, Chemistry

In this pilot project of Riipen, a work-integrated learning platform that connects top post-secondary students and recent graduates with employers through in-class, faculty-supervised industry projects, the students in a fourth year Pharmaceutical Chemistry course (CHMD71H) were partnered with Cognigen, a contract research organization supporting the pharmaceutical industry. The goal of this industry project was for students to work as a team to develop a marketing message describing the importance of molecular modeling and simulation in drug discovery and development, and highlight how Cognigen is best suited to meet the pharmaceutical industries’ needs for modeling and simulation. Project learning outcomes, skills developed by students, and sample projects along with industry feedback will be highlighted.

*Gender, Confidence and Mark Prediction in CS Examinations.*  
*Brian Harrington, Shichong Peng, Xiaomeng Jin, and Minhaz Khan*, Computer and Mathematical Sciences

In this work, we asked students in a CS1 course to predict their own grades on each question of their final examination. Analyzing the actual and predicted grades, and the differences between them leads to several interesting results. Poorer performing students are more likely to over-estimate their grades, while better performing students are more likely to under-estimate their grades. Furthermore performance on the exam is strongly correlated with ability to correctly predict marks. Perhaps most interestingly, we found that while there was no difference in performance of male and female students on the exam, female students were more likely to under-predict their performance than their male counterparts.

*Evaluating TA Confidence and Efficacy in Group vs. Individual Marking Scenarios.*  
*Brian Harrington, Nick Cheng, Marzieh Ahmadzadeh, Eric Wang, Vladimir Efimov*, Computer and Mathematical Sciences

In this work, we evaluate the marking party model by performing an experiment in which TAs are randomly assigned to either a marking party or solo marking when grading the final exam of a CS1 course. However, in addition to the student papers, each TA receives “fake” papers, constructed to lead to marking errors if TAs are not attentive or do not carefully follow the assigned marking rubric. We also evaluate the time that each method of marking takes, as well as survey the TAs as to their personal opinions on the two marking methods. Our results show that the marking party not only allows TAs to mark faster, but produces more consistent marking, with fewer errors, and better intra and inter-marker reliability.