

PLENARY I – DR. ERIC MAZUR, HARVARD UNIVERSITY
Wed., June 18, 2014 9:00 – 10:30AM | McArthur Hall| Auditorium

Why You Can Pass Tests and Still Fail in the Real World

Why is it that stellar students sometimes fail in the workplace while dropouts succeed? One reason is that most, if not all, of our current assessment practices are inauthentic. Just as the lecture focuses on the delivery of information to students, accompanying assessment often focuses on having students regurgitate that same information back to the instructor. Consequently, assessment fails to focus on the skills that are relevant for life in the 21st century. Assessment has been called the "hidden curriculum" as it is an important driver of students' study habits. Unless we rethink our approach to assessment, it will be very difficult to produce a meaningful change in education.



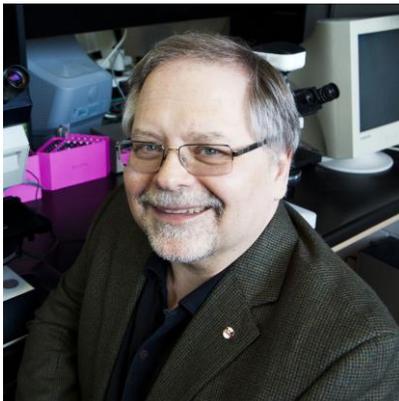
Dr. Eric Mazur is Dean of Applied Physics and Balkanski Professor of Physics and Applied Physics at Harvard University. In addition to his work in nanophotonics, Dr. Mazur is interested in education and science policy. In 1990 he developed Peer Instruction, a method for teaching large lecture classes interactively. Peer Instruction has developed a large following, both nationally and internationally, and has been adopted across many science disciplines. Dr. Mazur has served on numerous committees and councils, has chaired and organized national and international scientific conferences, and presented for the Presidential Committee of Advisors on Science and Technology. He serves as consultant to industry in the electronics and telecommunications industry. In 2006 he founded SiOnyx, a company that is commercializing

black silicon, a new form of silicon developed in Mazur's laboratory. In 2011 he founded Learning Catalytics, a company that uses data analytics to improve learning in the classroom. Mazur is Chief Academic Advisor for Turning Technologies, a company developing interactive response systems for the education market. He also serves on the Scientific Advisory Panel for Allied Minds, a pre-seed investment company, and on the Scientific Advisory Board for the Lifeboat Foundation, a non-profit non-governmental organization dedicated to encouraging scientific advancements.

PLENARY II – DR. JOHN SMOL, QUEEN’S UNIVERSITY
Thurs., June 19, 2014 8:45 – 10:00AM | McArthur Hall | Auditorium

Bringing the Joy of Discovery into our Classrooms: Blending Research and Teaching

Over recent years, growing tensions in colleges and universities seem to be arising over the apparently competing goals of research and teaching. Research is exciting and the results of research programs can change the world. The same is true for teaching. There are no reasons for accepting that such tensions should exist, although clearly both good research and good teaching require considerable effort and time. This presentation explores how research experiences can enhance our teaching programs, and vice versa. It also proposes some practical ways that research can be more effectively blended into our university curriculum, despite financial and logistical challenges.



Dr. John Smol is a biology professor at Queen’s University, where he also holds the *Canada Research Chair in Environmental Change*. Dr. Smol founded and co-directs the Paleocological Environmental Assessment and Research Lab (PEARL), a group of over 30 students and other scientists dedicated to the study of long-term global environmental change, and especially as it relates to lake ecosystems. An *ISI Highly Cited Researcher*, Smol has authored over 450 journal publications and chapters since 1980, as well as completed 19 books. He was the founding Editor of the international *Journal of Paleolimnology* (1987-2007) and is the current Editor of the journal *Environmental Reviews*. Since 1990 he has been awarded over 45 research and teaching awards and fellowships, including the *2004 NSERC Herzberg Gold Medal* as

Canada’s top scientist or engineer. He has won 10 teaching, mentoring and outreach awards, including a *3M National Teaching Fellowship*, and was chosen by *Nature* magazine (London, UK), following a nation-wide search, to be *Canada’s Top Mid-Career Scientific Mentor*. In 2013, the Governor General of Canada named John an Officer of the *Order of Canada*.

PLENARY III – 2014 3M NATIONAL STUDENT FELLOWS
Friday, June 20, 2014 8:45 – 10:00AM | McArthur Hall | Auditorium

Student Leadership in Post-Secondary Education

The 2014 cohort of 3M National Student Fellows will share their ideas about student leadership and challenges in post-secondary education. They will make connections between these two areas and offer ideas and solutions.

2014 3M National Student Fellows



Tari Ajadi

3rd Year, Bachelor of Liberal Arts and Science
Quest University

Tari, born in Gloucester, England to Nigerian parents, has always been interested in the stories of the marginalized: who capitalizes on power and who is pushed to the periphery of society. His drive to understand the nature of dominant and subversive narratives drove him to leave home at sixteen and attend UWC-USA, an international school in New Mexico comprised of 200 students from 80 different countries. From there, he moved to Quest University Canada in Squamish, BC, where he embedded himself in the community and expanded upon previously brief attempts at journalistic writing.

Since his first attempt at reporting, Tari has acted as editor-in-chief for two publications, the most recent being the newspaper he helped to found: The Mark. He has also written articles on race and education for publications such as The Globe and Mail and The Tyee. He recently co-wrote the profiles for The Globe and Mail's Canadian University Report, and is currently working on his first novel. He loves to write poetry and play music with friends.



Heather Carroll

4th year (of 5yr program), Bachelor of Primary/Elementary Education (Integrated French Immersion)
Memorial University

As an Education student, Heather is passionate about teaching and learning in a local and global setting. Through her time as a volunteer teacher at a school in Fiji and an orphanage and school in Cambodia, she experienced firsthand that education is a pillar of sustainable poverty reduction. She is challenging her faculty to include an international component, believing that they can create a movement that will liaise and encourage education students to work in the developing world.

Just as Heather innovates within her faculty, in her position as a Peer Advisor at Memorial's Academic Advising Centre she created a satellite office to expand the outreach capacity of the department. Heather participates actively in experiential learning initiatives at Memorial, and in her community she coaches an elementary girl's basketball team. As a leader on campus, Heather has been recognized as a recipient of Memorial's Gold VIP award. Heather's vision of global educational equality is illustrated locally as she volunteered at Atlantic Canada's first We Day, and has attended many social justice and education conferences. Heather is published in Project Third World's E-zine about her work in Cambodia and she has been selected to present research at the Aldrich Graduate Student conference.



Shwetha Chandrashekhar

3rd Year, Bachelor of Commerce, Major in Human Resource Management
University of Guelph

Shwetha has contributed greatly to her campus community through her initiatives outside the classroom. As Chapter President of Students Offering Support Guelph, one of several charitable sustainable social ventures across North America, she raised almost \$6,000 for sustainable education projects in Latin America with her team of volunteers by running several exam review sessions. She also conceptualized and initiated an event to motivate students to engage outside of the classroom: Redefining Success: How to Win at University & Life. She has co-founded Guelph Commerce Women in Business to encourage female students to embrace the reigns of leadership.

Through this venture, she co-initiated Building Beyond the Glass Ceiling: Empowering Women to Lead & Succeed to encourage social dialogue on the need for women in leadership roles. She has also been a frequent contributor to her campus newspaper and currently blogs on management and leadership issues in the workplace. Shwetha was selected as a national finalist in a business strategy competition, Focus 2040, in which she unveiled her vision for the world of work in the next thirty years. She is committed to ensuring that more students in her community fall in love with the pursuit of authentic learning.



Alex Harding

3rd Year (of 5 yr program), Bachelor of Engineering, Electrical
Dalhousie University

A born innovator, Alex integrates his talent for thinking differently with his passion for bolstering international education and outreach programs across Atlantic Canada. In 2013 he broke new frontiers as President of WUSC Acadia, bringing in more funding and immigration support for local sponsored students from international refugee camps than ever before in the university's 170 year history. Alex believes that these students are one of Canada's greatest assets, and by showcasing their stories and talents, they won Acadia's Club of the Year and WUSC People's Choice Awards, beating out 61 other universities across the country.

His renewable energy accomplishments include prototyping a \$90 dual-axis solar stove (currently in post-development to be deployed to Kenyan refugee camps) as well as publishing a mathematical model to reduce power estimation error on wind turbines by up to 30%. Never idle, Alex attributes his unwavering dedication to his teammates and his greatest source of inspiration to his brother, younger by five years exactly, and born with autism.



Yuhao (Danny) Huang
3rd Year, Honours Biochemistry
University of Alberta

Pursuing an Honors Degree in Biochemistry at the University of Alberta, Danny has been extensively involved in research and community leadership. Danny's investigation into prostate cancer has received the Gold Medal, Platinum, and Best-in-Fair accolades at the Canada Wide Science Fair 2011 and was one of the four regional projects to represent Canada at the International Google Science Fair 2012. To date, Danny is continuing his work in cancer biology, epidemiology, and structure biology, while co-authoring various scientific publications.

Aside from academia, Danny has founded the Kids Help Phone Student Committee, an official affiliation of the Kids Help Phone at the University of Alberta, and co-founded TeamUP Science, a registered non-profit organization working to promote STEM education. Recently, he has launched the National Student Network, an innovative online platform that centralizes youth-relevant opportunities and crowd-sources mentorship from exceptional youth in Canada. Danny also serves as a Board Member for the State Farm Youth Advisory Board, a 5 million dollar grant giving body and as the Executive Vice President for the Canadian Blood Services Youth Committee. During his spare time, he enjoys web development, dance and music.



Jaxson Khan
3rd Year, Honours Specialization in Global Development Studies
Huron University College

Named one of Canada's Top 20 Under 20 young leaders, Jaxson is an undergraduate student at Huron University College at Western. Jaxson is a leader of the Young Diplomats of Canada, which represents Canada in the International Diplomatic Education Association, and engages the country's top young professionals in global forums and opportunities. Jaxson co-founded and is the Chair of the Board of Student Voice Initiative, a Canadian movement which has successfully advocated for student leadership policies across the nation.

Jaxson co-chairs the national AstraZeneca Young Health Program, a global community investment initiative which helps young Canadians in need deal with mental and physical health issues. He co-founded The Globe and Mail Student Advisory Council, which informs and writes student-authored editorials for a national publication with a readership of more than 3.5 million. He has travelled to and conducted research in fifteen countries across four continents, including the UK, Belgium, Israel, Rwanda, and Ethiopia, and represented Canada at the United Nations in New York City as well as the G8 Youth Summit. Jaxson is an Ambassador of One Young World, and a Global Shaper of the World Economic Forum.



David Kim
5th Year (of 7 yr program) Medicine (MD)
University of British Columbia

David believes in empowering and fostering a sense of global responsibility in those around him. He achieves this with involvements in the community such as founding UBC Students Offering Support with fellow students raising more than \$50,000 in the past 4 years. Passionate about improving access to education, David subsequently went to Nicaragua to help build an elementary school with the funds they raised. David was the Chief Operating Officer of the World Model United Nations Conference in 2012 which brought together over 2,300 student leaders from 70 countries across the globe to Vancouver. During the weeklong conference, David and his team inspired leaders around the world to implement positive changes in their respective communities through discourse and calls to action. In addition, David was elected to serve as one of the directors of the UBC Alma Mater Society representing over 46,000 students, volunteered as a piano instructor for marginalized youth, does research at the UBC Department of Urologic Sciences, and teaches taekwondo in the community with proceeds going towards charities. Currently, David is a medical student at UBC hoping to specialize in emergency medicine and is excited to make a positive impact in global health in the future.



Tye Landels
3rd Year, Bachelor of Arts, Honours English
University of Victoria

Tye defines leadership as a community action, arising out of a community setting with communitarian aims. He regards himself as both a leader and a citizen in a variety of diverse communities. As president of the University of Victoria's English Students' Association, Tye has led numerous initiatives to foster interconnectedness, fairness, and opportunity among his department's diverse undergraduate student body. As an encoder and research assistant for Dr. Janelle Jenstad's Map of Early Modern London (MoEML), a renowned digital encyclopedia, Tye has led a groundbreaking initiative to disseminate the project's technical instructions, methods, and workflow practices to digital humanists worldwide. Moreover, as a student with physical disabilities, Tye challenges ableist stereotypes and asserts the value of accessibility and inclusion in the undergraduate classroom.

Tye's firm belief in the values of equality, self-actualization, democracy, and accessibility unites and guides his many efforts as a community leader. He identifies and intervenes when he sees these values threatened, unrealized, or underdeveloped in his communities. In this vein, Tye advocates for reforming the institutions and ideologies that isolate and oppress many undergraduate students on Canadian campuses. He believes that undergraduates can rejuvenate institutions of higher learning and transform their local and global communities.



Peter Liu

3rd Year, Honours Bachelor of Health Sciences, Major Biomedical Sciences
University of Calgary

Peter's optimism for life stems from his transformation from a disease burdened child to an international gold medalist in martial arts. As a firm believer in the unique potential that every member of society holds, he empowers his community through leadership, education, and medicine. Peter inspires students to bring out their untapped potentials. As Class Ambassador for the Class of 2015, he implements graduation programs and establishes a strong sense of community in the student body. As an Executive in five student organizations, he is a dedicated advocate for social justice, healthy living, and global health. In addition, as an Orientation Leader, peer helper, and leadership workshop facilitator, he has an indispensable role in cultivating future leaders.

Peter aspires to be a clinician-scientist bringing medical innovations to society. Since first-year, he has contributed three publications to academic journals. His research using oncolytic virus to treat lung cancer is anticipated to culminate into a human clinical trial while his investigation on genome instability aims to unravel novel cancer therapeutic targets. In July 2014, he will be establishing genetic diagnostic tools and teaching a university-level molecular biology course in Nicaragua, implementing his long-envisioned goal of achieving sustainable development through education and innovation.



Shannon McAvoy

3rd Year, Regional and Urban Planning
University of Saskatchewan

Shannon is a leader in campus academic support, student organizations, and off-campus community-based social advocacy groups. She has demonstrated self-direction, maturity, passion, and engagement. She is committed to improving the quality of student experience through innovative ideas about how to do this by setting a good example for her peers. Through her enthusiasm and passion, Shannon inspires her peers, formally as a volunteer peer mentor in the University Learning Centre, and member Planning Students Association executive, but also less overtly in her outreach work, as a student athlete, and as a classmate.

In readily volunteering her time to numerous projects, she devotes time to endeavors for which she is passionate, especially those that facilitate community building as time well spent. When leading the organizing of an extra-curricular event, such as the 2013 Catholic Students Association Conference, or a fundraising drive, as she did for victims of Typhoon Haiyan, Shannon draws her strength from others. Shannon models leadership that is inclusive and seeks to foster and promote understanding among disparate groups as demonstrated through her work alongside City of Saskatoon community development staff, or with her prison outreach activity.