



Summer Institute 2014 - APPLIED CLIMATE CHANGE

August 05 to 08 2014 - Brock University

Join experts from Brock University’s Environmental Sustainability Research Centre (ESRC) and the University of Prince Edward Island (UPEI) to gain professional development experience in the area of applied climate change. From August 5th to 8th 2014, students will participate in modules related to climate observation and data analysis, climate change scenarios, climate impact analysis and adaptation option selection, all within an overarching theme of fostering climate leadership. The course will incorporate lectures, case studies, step-by-step approaches, study tours, and hands-on activities to highlight practical adaptation measures in community planning, biodiversity, water resources, infrastructure, and viticulture. Brock’s unique place within the Niagara Escarpment Biosphere Reserve allows participants the opportunity to learn from researchers working actively in the field of climate change practice.

Contact Brad May at bmay@brocku.ca or Adam Fenech at afenech@upei.ca for more details and watch for updates on the ESRC web site - <http://brocku.ca/environmental-sustainability-research-centre>.

Module 1	<p>Climate Change Adaptation Leadership</p> <p>Leadership is essential in sustaining momentum for climate change. Drawing from the management literature on change, innovation and transformation, this interactive module examines the role of adaptation in developing climate change plans. Important leadership competencies are presented through the use of a process called adaptive collaborative risk management (ACRM). A case study approach allows participants to learn from the facilitator, and each other, while developing ideas for contributing to their own climate change leadership development.</p>
Module 2	<p>Climate Observations and Data Analysis</p> <p>This module provides the knowledge and tools necessary to understand how to acquire and organize climate observations and quality control/assure them for analysis. Introductions are given to monitoring the climate (instruments, siting, records, automation); acquiring climate data through national and international climate datasets; climate data management; downloading climate datasets; and quality controlling/assuring climate data. Access to tools for obtaining climate observations is also provided along with providing the knowledge and tools necessary to analyze climate observations for trends and extreme values. It includes organizing and visualizing data; analyzing climate data for annual, seasonal and monthly trends; and characterization of climate datasets. The module provides tools for long-term analysis of climate.</p>
Module 3	<p>Climate Change Scenarios</p> <p>This module provides the knowledge and tools necessary to acquire regional scenarios of future climate change. Introductions are given to the Canadian Climate Change Scenarios Network; and the calculation and use of scatter plots and bioclimate profiles. The module is designed to provide practical tools for understanding how the future climate may change in your region.</p>
Module 4	<p>Climate Impact Analysis and Adaptation Options</p> <p>This module provides the knowledge and tools necessary to evaluate climate change adaptation options. Topics include: current and future vulnerabilities to climate change; how humans are adapting to current climate extremes; and the costs and benefits of climate change adaptation. The module is designed to provide an introduction to climate change adaptation, with a focus on the Niagara Region and its unique place in a Biosphere Reserve.</p>

CONFERENCE REGISTRATION:

Full Registration (includes pre-course material, reading list, lecture notes and learner's guide) = **\$400** (plus HST)

Per Day Rate (includes daily lecture notes only) = **\$125** (plus HST)

To register, please visit: <https://registration.campbrain.com/Portal/Login.aspx?H=BrockUniversity&G=651&M=R>

COURSE INSTRUCTORS

Adam Fenech	Dr. Fenech has worked extensively in the area of climate change for over 25 years starting with the IPCC First Assessment Report. He has edited 7 books on climate change, most recently as editor of the journal on Climate Impacts and Adaptation Science. Dr. Fenech has taught at the University of Toronto since 1998, and lectures regularly at universities across Canada and internationally. Dr. Fenech shared in the 2007 Nobel Peace Prize for his work with the IPCC. After working as a researcher with Environment Canada, he joined UPEI as director of the Climate Research Lab.
Brad May	Brad May is an adjunct professor and associate with the Brock University ESRC. He is also a PhD candidate in Geography and Environmental Management at the University of Waterloo and member of the Environmental Change and Governance Group (ECGG). Brad previously worked for Environment Canada as the Program Manager for the Adaptation and Impacts Research Section.
Gary Pickering	Dr. Pickering is Professor of Biological Sciences and Psychology, Brock University, Member, Brock ESRC, Brock University, Research Scientist, Cool Climate Oenology and Viticulture Institute (CCOVI), Brock University and Scientific Advisor, The Sensory Network, University of Toronto. He is the lead researcher on a \$2.86 million grant from the province of Ontario for studying climate change in the grape and wine industry.
Steve Renzetti	Dr. Renzetti is a Professor of Economics at Brock University. His research is concerned with the economics of water resources and he is the author of The Economics of Water Demands and coauthor of Economics of the Environment and Natural Resources. Dr. Renzetti's current research is concerned with modeling industrial water recycling decisions and measuring water utility efficiency. He is also an Associate Editor of Water Resources Research and currently serves as the Scientific Director of the SSHRC-funded - Water Economics, Policy and Governance Network.
Tony Shaw	Dr. Tony B. Shaw is a Professor in the Department of Geography and a Fellow of CCOVI at Brock University. He teaches courses principally in the areas related to meteorology, applied climatology, viticulture, and environmental sustainability. His research areas include wine terroirs, site selection methods for new vineyards, freeze protection methods, renewable energy, building climatology and climate change and impacts. Current research projects include the demarcation of sub-appellations in Ontario's main wine regions, assessment of new areas for wine production and the potential impacts of climate change on Ontario's main wine appellations and the emerging regions.
Jyoti Upadhyaya	Dr. Upadhyaya is an associate with the ESRC at Brock University. She has developed a sustainability assessment framework for infrastructure during her doctoral research at the department of Civil and Environmental Engineering, University of Windsor, Ontario. She has also developed sustainability indicators (SIs) for rural wastewater reuse systems in Victoria, Australia. Jyoti is an EIT with the Professional Engineers Ontario, and a member of the Water Environment Association of Ontario. She previously worked as an engineer in municipal water sector in Nepal.
Liette Vasseur	Dr. Vasseur is a professor of Biological Sciences at Brock University and also a member of the Women and Gender Studies program and the ESRC. She currently leads the thematic group on Climate Change Adaptation of the Commission for Ecosystem Management of the IUCN. Her research is highly interdisciplinary and links issues such as community-based ecosystem management, climate change adaptation and resilience and sustainable agriculture. Her community-research work with the City of greater Sudbury led her to receive in 2011 the Latornell Pioneers Award from Conservation Ontario. She is currently on the co-direction committee of a large project on Coastal Communities Challenges in the face of Climate Change, funded by the SSHRC. Dr. Vasseur is also a Minjiang Scholar at Fujian Agriculture and Forestry University, China.