Department of Geography and Environmental Management  
Faculty of Environment, University of Waterloo  

ANNUAL REPORT TO FACULTY COUNCIL AND GENERAL ASSEMBLY  
2017-18

The Department of Geography and Environmental Management (GEM) continues to be ranked in the top 100 of the QS World University Rankings of Geography departments and maintains its position as fourth in the country. This is due to the strong commitment of its faculty, staff and students to academic excellence and its vibrant, supportive and engaging environment within the Faculty.

Academic Plans

The department offers undergraduate plans in Geography and Environmental Management, Geomatics, and Geography and Aviation; all but the Aviation program are available as regular and co-op streams. There is continued activity in the 2+2 and 1+2+1 undergraduate plans with Chinese universities, including Nanjing University, Wuhan University, China University of Geosciences (Wuhan), China University of Geosciences (Beijing), Chang’an University (X'ian), Capital Normal University (Beijing) and Southeast University, China. Our graduate thesis programs (Masters and PhD programs) continue to be strong and our 1 + 1 + 1 program continues to develop. The Masters in Climate Change (MCC) program continues to strengthen with students being drawn from across Canada and the Graduate Diploma in Climate Risk Management will begin in 2018.

The department also partners with a number of other academic units in the delivery of undergraduate and graduate plans. The Department makes a significant contribution to the running of the MAES program in Masters of Economic Development and Innovation, based in the School of Environment, Enterprise, and Development. And through our partnership with the Department of Geography and Environmental Studies at Wilfred Laurier University, the Waterloo-Laurier Joint Graduate Program in Geography continues to thrive.

Faculty and Staff

GEM is home to three Canada Research Chairs (Tier 2), Sarah Burch (SSHRC), Maria Strack (NSERC) and Christine Dow (NSERC). It is also home to two University Research Chairs (Daniel Scott and Claude Duguay). This year we also welcomed Erin O’Connell into the Department as a faculty lecturer and member of GEM.

We have had a mostly stable year on the staff front. The department is very fortunate to have a highly skilled complement of staff who are essential in maintaining the high quality and level of service to students and faculty alike. Susie Castela continues as the Department Administrator while Alan Anthony and Teresa Wilson continue as Graduate Program Administrators. Miljana Kovacevic is the Undergraduate Program Advisor for Geography and she was joined by Jesse MacLeod as undergraduate advisor for Geomatics, Aviation and international undergraduate programs.

Research

Research continues to be a high priority activity, as faculty participate in research projects representing more than $5 million in funding ($1.2 million more than last year). Major ongoing funding sources include SSHRC, NSERC, CIHR and several other departments or government agencies (e.g. Canadian Space Agency, Indian and Northern Affairs Canada, Alberta Innovates,
Ontario Ministry of Agriculture, Food and Rural Affairs, Natural Resources Canada, Meteorological Service of Canada, The European Space Agency, The Japan Aerospace Exploration Agency, and Environment and Climate Change Canada). Provincial sources of funding include the Ontario Centres of Excellence. Geographers also participate in collaborations (e.g. SSHRC Partnership, Networks of Centres of Excellence [AllerGen, ArcticNet and Meopar], CFI, NSERC CRF) based at other universities. Private sector research partnerships continue to be important, as funding is received both directly and through NSERC and OCE collaborations. Some of our private sector partners include Suncor Energy, Syncrude Canada, the Canadian Oilsands Innovation Alliance, DeBeers Canada, and Climate Change Emissions Management Corporation. Our international research partnerships continue to grow.

During the year two colleagues received significant recognition for their scholarship and discipline-specific contributions. Dr. Phil Howarth (retired) was awarded the Camsell medal from the Royal Canadian Geographical Society and Dr. Sarah Burch was elected to the College of New Scholars at the Royal Society of Canada.

Academic Programs
Prestigious activities continued in our academic programming. Susan Elliott and Johanna Wandl, with members of the Water Institute, welcomed Canadian Queen Elizabeth II Diamond Jubilee – Advanced Scholarship students during 2017-18. Teaching innovation is also an acknowledged dimension of GEM’s teaching and learning activities with Su-Yin Tan (international education and learning activities) and Derek Robinson (technological innovations) both continuing as the Faculty Teaching Fellows.

Graduate – Brent Doberstein continued as Associate Chair, Graduate Studies this year. Alan Anthony continued as the Graduate Program Administrator for MES, MSc, MA and PhD programs while Theresa Wilson continues this role for the MCC program. Our graduate programs continue to be in demand. This year, 14 new PhD students and 70 Masters students (37 in GEM, 32 MCC, 1 China 1+1+1) entered the grad program. In total, the total current enrollment consists of 110 Masters and 66 PhD students in our graduate program for a total of 176 students (full time and part time). The list of UW geography graduate students receiving external awards was 4 NSERC, 1 SSHRC, 4 OGS and 1 Trillium scholarship. During the 2017-18 academic year, 28 students received their Master’s Degree in Geography and 7 students received a PhD. Additionally, the total number of MCC students receiving their degree was 21.

In 2017-18, the Department’s reputation for innovation in program development has continued with the approval by the Ministry of an application to begin delivery of the Graduate Diploma in Climate Risk Management. This online diploma will begin in the fall of 2018 and is the outcome of a successful funding bid to eCampus Ontario for its development. In addition, a successful EU Erasmus+ exchange project has resulted in faculty and student mobility between GEM and Jena University (Germany) during the year.

Undergraduate – Ian McKenzie continued to serve as Director for Aviation, and Associate Chair, Undergraduate for Geomatics and international plans (2 + 2 and 1 + 2 + 1). During the year, Merrin Macrae stepped down and Johanna Wandl took over the role of Associate Chair, Undergraduate studies for GEM plans. Jesse MacLeod joined GEM in the Department office and to work with Miljana Kovacevic serving as Undergraduate Program Advisors, handling Geomatics/Aviation and GEM plans respectively. A total of 193 new students entered Geography plans in the 2017-2018 academic year (33 GEM Co-op, 4 GEM regular, 87 Geomatics Co-op, 5 Geomatics regular, and 24 AVIA). These first year admits were supplemented by 32 new 2+2 and 8 1+2+1 international students, along with 8 internal transfer students, bringing the overall total
number of new students to 193. The demand from students seeking to transfer into Geography plans continued to decline this year. In total, across all years and plans, there are 660 students enrolled in GEM.

At Convocation ceremonies in Spring and Fall of 2017 a total of 107 students received an Honours Degree in Geography, Aviation, or Geomatics with 32 students graduating with a General Degree in Geography. A further 74 students received a minor in Geography. A grand total of 132 students (majors and minors) graduated in 2016.

The Department’s Committee on Undergraduate Recruitment continues to conduct significant outreach to well over 100 high schools in Ontario and through social media strategies. In addition, a comprehensive undergraduate curriculum review is ongoing through the Curriculum Review Committee. Significant progress has been made in rationalizing the core programming in our undergraduate plans to increase predictability of course offerings. This will benefit students in the long run. In addition, previously developed online courses in Climate Change Fundamentals, and Introductory GIS/Geomatics have been well received and will continue to be delivered to students across campus. In addition, three other new courses are in development.

**Administration**

Contributions in the past year to University and Faculty level administration include: Jean Andrey continuing as the Dean of the faculty. Claude Duguay continued in his role as Associate Dean for Research while Dan Scott continues as the Director of the Interdisciplinary Centre on Climate Change.