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 occupies the fifth position in the country. It is also in the top 100 Geography Departments according to the Shanghai Academic Rankings of World Universities. On both counts, our success rests on the strong commitment of its faculty, staff and students to academic excellence in scholarship and learning 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 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 online Graduate Diploma in Climate Risk Management was launched in September 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 program in Masters of Economic Development and Innovation, based in the School of Environment, Enterprise, and Development. We also contribute strongly to the University’s Collaborative Water Program which is delivered by multiple departments through the Water Institute. 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 30 faculty full time equivalents including 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 celebrated the retirement of Ellsworth LeDrew who was a member of GEM for 41 years. His many scholarly, teaching and administrative contributions to the Department, Faculty and University are significant and the Department wishes him well.

We have had a 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 with Jesse MacLeod 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 $6.7 million in funding ($1.7 million more than last year). Major ongoing funding sources include SSHRC and NSERC 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 also continue to grow.

During the year three colleagues received significant recognition for their scholarship and discipline-specific contributions. Dr. Dan Scott received the Award for Distinction in Geography from the Canadian Association of Geographers. Suzanne Kearns received the William A. Wheatley Award for outstanding aerospace education and Sarah Burch was named as one of Canada’s Top 40 under 40.

Academic Programs
Prestigious activities continued in our academic programming. As ever, teaching innovation is also an acknowledged strength 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 – Chris Fletcher took over from Brent Doberstein as Associate Chair, Graduate Studies this year. Alan Anthony continued as the Graduate Program Administrator for MES, MSc, MA and PhD programs while Teresa Wilson continues this role for the MCC program. Our graduate programs continue to be in demand. This year, 19 new PhD students and 54 Masters students (29 in GEM, 25 MCC/GDip, 1 China 1+1+1) entered the grad program. In total, the total current enrollment consists of 111 Masters and 77 PhD students in our graduate program for a total of 188 students (full time and part time). The list of UW geography graduate students receiving external awards was 3 NSERC, 1 SSHRC, and 5 OGS. During the 2018-19 academic year, 45 students received their Master’s Degree in Geography and 11 students received a PhD. Additionally, the total number of MCC students receiving their degree was 22.

A successful EU Erasmus+ exchange project continues to provide opportunities for faculty and student mobility between GEM and Friedrich Schiller University, Jena (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) and Johanna Wandel served as Associate Chair, Undergraduate studies for GEM plans. Jesse MacLeod supported 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 152 new students entered Geography plans in the 2018-2019 academic year (33 GEM Co-op, 4 GEM regular, 82 Geomatics Co-op, 5 Geomatics regular, and 24 AVIA). These first year admits were supplemented by 18 new 2+2/1+2+1 international students, along with 26 internal transfer
students to our programs, bringing the overall total number of new students to 192. The demand from students seeking to transfer into Geography plans increased this year. In total, across all years and plans, there are 723 students enrolled in GEM.

At Convocation ceremonies in Spring and Fall of 2018 a total of 85 students received an Honours Degree in Geography, Aviation, or Geomatics with 18 students graduating with a General Degree in Geography. A further 74 students received a minor in Geography. A grand total of 145 students (majors and minors) graduated in 2018.

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, through the Curriculum Review Committee, re-aligned our geomatics degree plan programming. 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 Designing Effective Maps have been well received with the last one, Designing Effective Maps winning the 2018 award for excellence in online course design. A new online course, Global Environment and Health, was delivered during this year with great success. Two new courses are being delivered for 2019, Food Systems and Sustainability and Global Environmental Systems: Process and Change. These courses continue to be delivered to students across campus.

Finally, the department provides an important service teaching role for the Faculty and University with students from across the faculty and University attracted to courses that are offered in our degree plans and delivered by our instructors. On average GEM taught about one third of all students that take courses in the Faculty of Environment (including students registered in programs within the faculty and from other faculties) and it teaches almost half of all students from outside the faculty who take courses in the Faculty.

**Administration**

Contributions in the past year to University and Faculty level administration include: Jean Andrey continuing as the Dean of the faculty. Dan Scott continues as the Director of the Interdisciplinary Centre on Climate Change. External administration is full of vitality with Sanjay Nepal the President of the Canadian Association of Geographers and Rich Petrone the President of the Canadian Geophysical Union. The department also makes a substantive contribution to the university governance through representation in the Faculty Association (Executive and Board), Faculty Relations Committee, Senate, and the faculty grievance committee.