

Ottawa-Carleton Geoscience Center
Update on Unit Response to External Reviewers' Report & Action Plan
Programs Being Reviewed: Graduate Programs in Earth Sciences with the University of Ottawa
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Note: This document is made available for public posting on the Vice- Provost's website.

***** Denotes items that SQAPC would like the unit to pay particular attention to based on their past review of the original action item.**

External Reviewer Recommendation	Original Action Item	Owner & Timeline	Progress Update June 2023	Have calendar changes been initiated or completed (Not applicable/Yes/No), if Yes, when
<p>1. Weakness: Historically the OCGC provided a nexus of research and graduate training. The two units provided joint access to resources, infrastructure and networking for two small departments. Unfortunately, with continued expansion and diversity of interests over the last 10 years, the OCGC structure has not evolved with changes in research scope and diversity of interests across both departments. The rationale on paper behind the formation of the units is sound, for some but in practice, the OCGC does not seem to represent the interests of the entire research community.</p>	<p><i>A set of changes carried out unconditionally by the Centre are listed below but parallel to this, and critical for the OCGC to achieve its objectives, is (as defined by reviewers) need for a renewed collaboration of mid- and upper-level admin between the two universities to establish improved financial support (i.e, OCGC as a line item in each of the two geoscience dept budgets) and recognition for the Joint Institute framework administered by Carleton University and University of Ottawa.</i></p>	<p><i>OCGC, Carleton and UOttawa senior admin</i></p>	<p><i>Support for the OCGC has not been uniform within the administration at both universities, including from the departmental level on up. This has resulted in little progress in securing additional financial support and/or furthering the goals of the Centre. It is clear that the joint institute does not fulfill the role that was initially envisioned and there is a need to redefine the role of the institute to maximize the benefit to grad students and ensure that they are able to access resources within both institutions. Currently the OCGC provides important opportunities for graduate students, including the ability to take graduate courses at the partner institution, joint research seminars in the fall and winter terms, the ability to access research infrastructure and research expertise at both institutions. These important benefits remain and discussions will be initiated between the departments to resolve this issue. With lingering challenges presented by the COVID19 Pandemic and additional challenges due to budgetary constraints this has not been a priority.</i></p>	

<p>2. Opportunity: Given the excellence, diversity of research of the faculty, adjuncts, and genuine support from the graduate student population represented across the two units, now is the time to implement a “strategic vision” that implements positive changes to reflect this diversity; this is low hanging fruit that can be achieved through simple modifications to the current structure involving 1) higher visibility via redesigned combined web portals 2) creating stronger communication links (i.e. email listserv) 3) more support and recognition from the upper and mid administration units towards resources needed to fulfill and maintain the student experience.</p>	<p>1. Agreed to unconditionally <i>(a) a “mission” statement exists but a new constitution defining the Centre’s vision, EDI, activities and responsibilities, membership, and administrative practices is required;</i> <i>(b) telephone/email list circulation to all members</i></p> <p>2. Agreed to if additional resources permit <i>Some changes require guaranteed annual funding for the OCGC (ie., line items in budgets of the two geoscience departments) with support and recognition from upper and mid admin of the universities:</i></p> <p><i>a) OCGC website (3rd party site) as portal of communication within and external to the two institutions</i></p> <p><i>b) administrative support for data management and its distribution;</i></p> <p><i>c) funding for OCGC activities to enhance the student experience (1-day orientation Fall retreat; PDAC activities; workshops; support for student-initiated events)</i></p>	<p>For 1. OCGC</p> <p>For 2. Inter-institutional discussions required at Dean and higher levels</p>	<p><i>1. No progress has been made on this front. As noted above, there needs to be consensus between the two department with respect to the role and value of the Centre and this work is ongoing.</i></p> <p><i>2. Additional resources including financial and administrative support have not been made available.</i></p>	
<p>3. Opportunity: When a new website is developed for the OCGC, it can include a list of faculty and adjuncts by disciplinary area to assist prospective and current students in finding people of shared interests to facilitate interaction.</p>	<p><i>Prior to submission of the external reviewer’s report, Carleton EARTH moved to solicit involvement of the Carleton Ombuds Office to engage graduate students in discussion about the origin of the poor satisfaction level associated with Carleton EARTH (PhD). The Ombuds Office</i></p>	<p>Co-share:</p> <p>1: OCGC,</p> <p>2: institutional funding (Carleton, UOttawa)</p>	<p><i>This report was received and identified several areas where communication could be improved to enhance the role of the OCGC. We have made efforts to streamline and clarify communication among grad students at Carleton, but without additional financial and administrative support this website was not developed, and OCGC-wide communications remains ad hoc.</i></p>	

	<p>carried out its survey during April-June 2020, and the department is still waiting for the report due to delays arising from within the Ombuds Office (written communication to department Chair from Ms. Melanie Chapman, Ombuds Office, Nov 2021). Once the report is received, there will be continued work with the Ombuds Office to determine the best approach to resolve student concerns and determine how annual assessments can be conducted. This work could start by January 2022.</p>			
<p>4. Weakness: The role of the Centre, and therefore also of its Director, are not well-defined. Without explicit administrative support (allocated time) for the Director or supporting administrators, the Centre is very limited in its activities.</p>	<p>For 1. Re-write the OCGC constitution: the OCGC will be a community of scientific scholars and provide access to research and teaching resources and will share in student-research governance. Membership will include any scholar (and student) formally affiliated with either institution with an interest in earth and environmental sciences.</p> <p>For 2. Stable funding is required to maintain accurate annual collation of OCGC data related to student and faculty activities in order to provide up-to-date information for student recruitment purposes.</p>	<p>1. OCGC</p> <p>2. institutional funding (Carleton, UOttawa)</p>	<p>1. Progress has not been made on this front. As noted above, there needs to be consensus between the two department with respect to the role and value of the Centre and this work is ongoing</p> <p>3. Additional funding required to support additional administrative tasks, such as the collation of data has not been secured. Currently, administrative staff are fully occupied with other tasks.</p>	
<p>5. Weakness: Communication within the OCGC was identified by all parties as seriously lacking. The Centre has no website and no email list. Essential communications are not shared across the Centre membership and this is a huge impediment to</p>	<p>See #2 and 3 (above)</p>	<p>See #2 and 3</p>	<p>See #2 and 3</p>	

participation and access for graduate students.				
6. Opportunity: A trusted faculty member appointed as an ombudsperson to hold confidential nonbiased listening sessions is recommended.	<i>Fall orientation and website information will define available resources in each dept and institution that a student can use for advice/consultation. In successive order of likelihood: peers, advisor, other faculty in dept; dept grad advisor, Chair, Dean's Office or University services, University Ombuds office</i>	<i>OCGC and institutional services (Carleton, UOttawa)</i>	<i>Fall orientation sessions and the graduate handbook circulated to students outlines available student resources, including access to the ombudsperson.</i>	
7. Weakness: New faculty in both departments would clearly benefit from more formalized mentoring and onboarding, which would also strengthen relationships within the departments and the OCGC.	<i>The OCGC calls on the two universities to make mentoring a priority and provide necessary funding to departments to help new faculty or faculty needing to change research directions mid-career</i>	<i>Dept/ university input required (Carleton, UOttawa)</i>	<i>Both UOttawa and Carleton have successfully onboarded several faculty in recent years with a range of mentoring options. At Carleton, a formal process does not exist but with a small unit with offices centrally located, new faculty are able to speak freely to both other new faculty to share experiences and Full Professors to seek career development advice.</i>	
8. Weakness & Opportunity: For faculty, adjuncts and students from across the breadth of the disciplines to feel ownership of the OCGC, it's essential that the OCGC confirm and support the increasingly broad scope of science that is included in geoscience. The currently proposed actions to increase community (e.g., introductory field trip, required geoscience core components in curriculum) could backfire if they communicate a more narrow, historical view of the disciplines. This is an opportunity to survey the community at large perhaps have a "joint faculty retreat" to discuss field trip options, and alternative strategies that reflect the broad and overlapping interests for the two units.	<i>For 1 and 2: Some OCGC activities below can be carried out without funding, others require annual funding (currently not formally defined at UOttawa, but in place at Carleton). Action items: a) 1-day Fall orientation for grad students, with tours of joint facilities (cost: bus rental, BBQ) b) Fall field excursion, Winter lab excursion (bus rental)</i>	<i>OCGC, with institutional (Carleton, UOttawa) funding for field trips</i>	<i>As noted above, support for the OCGC varies throughout the units and a rethink of the role and goals of the OCGC is necessary. Given financial constraints and lack of dedicated resource to the OCGC, it is unlikely that many of these activities will transpire. Some activities continue; these include OCGC seminars on a regular bases, and twice per year (fall and winter terms) graduate student seminars.</i>	

	<p>(c) OCGC Social event after/during OCGC Grad Student Seminars (2x per year)</p> <p>(d) Prospectors Developers Assoc. Can (PDAC) - premier annual event for earth and environmental science bringing alumni now in govt and industry together with OCGC members (costs: social event with rental)</p> <p>(d) OCGC Seminars (1 per month addressing big topics of interest across earth and environmental science) (no cost)</p> <p>(e) increased communication and accessibility to all other types of seminars in OCGC (no cost)</p> <p>(f) establish multi-discipline focused courses that address integration of diverse subjects</p>			
9. Concern: For faculty and adjuncts not automatically included in the OCGC as members of participating departments, the criteria and pathway for membership must be formalized and clearly communicated.	<p>Re-writing of the OCGC constitution (which is out-of-date): namely, membership is automatic if individual is related to research and training of earth and environmental science and has a defined affiliation (student, faculty, adjunct, staff) with either university. The proposed website will act as communication to recruit both students and faculty/govt/industry researchers.</p>	OCGC	<p>No further action on this item has occurred. As noted above, the direction and functioning of the OCGC is not agreed upon at both institutions. Currently we promote and take advantage of the functions of the OCGS that work, i.e. joints seminars, cross-listed courses, access to resources, etc., but these larger issues need to be addressed before issues such as this can be tackled.</p>	
10. Opportunity: To establish and strengthen networks within each department and across the OCGC, formalize structures for introducing people to one another, especially new people joining the Centre.	<p>Increased awareness of OCGC through communication (website, report of activities in each dept's meetings; formally defined Assoc Director in geoscience dept that does not host the Director to enable cross-dept</p>	OCGC (assumed with funding – see #8)	<p>No further action on this item has occurred. As noted above, the direction and functioning of the OCGC is not agreed upon at both institutions. Currently we promote and take advantage of the functions of the OCGS that work, i.e. joints seminars, cross-listed courses, access to resources,</p>	

	<i>communication; increased communication and social interactions in general – see #8)</i>		<i>etc., but these larger issues need to be addressed before issues such as this can be tackled.</i>	
11. Opportunity: Establish communication between the two units via combined web portal, up to date list of members, and email listserv.	<i>See #2, 3, 5 (above)</i>	<i>See #2, 3, 5 (above)</i>	<i>No further action on this item has occurred. As noted above, the direction and functioning of the OCGC is not agreed upon at both institutions. Currently we promote and take advantage of the functions of the OCGS that work, i.e. joints seminars, cross-listed courses, access to resources, etc., but these larger issues need to be addressed before issues such as this can be tackled.</i>	
12. Opportunity: We note in section H, there is a proposal to require some kind of disciplinary “geoscience” core through courses or seminar attendance. To make sure that this does not elevate the traditional geoscience disciplines as more important than other member disciplines, students with a traditional geoscience background should also be supported in taking courses in the more broad, modern scope of what constitutes geoscience (physics, programming, biology, chemistry, etc). Validating the breadth of disciplines in the OCGC this way may help support the engagement of currently disengaged members.	<p><i>Since the report, a revised approach:</i></p> <p><i>a) expansion of current knowledge and breadth of expertise will be carried out using seminars. The OCGC Seminar will include only broad-based presentations illustrating integrated nature of earth and environmental sciences.</i></p> <p><i>communicate schedules and increase accessibility to more informal (or topic specific) seminars and talks in departments with OCGC members</i></p>	<i>OCGC</i>	<i>OCGC seminars continue and are proposed by a broad range of geosciences. Attendance at these seminars is at the discretion of individuals and at this point there is no intention of making it mandatory, although ongoing efforts continue to encourage graduate students to obtain a broaden their knowledge base.</i>	
13. Weakness: Students 2019 satisfaction survey shows significant dissatisfaction with both MS programs and with the Carleton PhD program. The analysis provided in the self-study attributed low satisfaction mostly to external factors such as career uncertainty. Perhaps this is an area where career opportunity workshops could be implemented. The analysis also showed a level of frustration with Carleton student success rates dealing with financial aid (e.g.,	<i>(1) For PhD and MSc concerns (Carleton): The Dept of Earth Sciences invited (Mar 2021) the Ombuds Office to interview and survey graduate students; results will be made known to department; also, Career workshop seminars have been established for the department through University services</i>	<i>(1) Carleton (Dept of Earth Sciences)</i>	<i>1) The ombuds report was completed and identified several issues brought forward by graduate students. Many of these issues were related to poor communications, either within the Department or the OCGC. As noted above, the creation of a joint website and administrative support were identified as remedies for this situation, but that idea did not gain support. At the department level, we have made efforts to improve our communications with the graduate students, including regular updates to</i>	

<p>failure to respond to aid opportunities in a timely manner. The report states that the department is investigating the reason for this, but we saw no plan in place.</p>	<p><i>(2) the UOttawa cohort will evaluate whether a similar evaluation would be beneficial</i></p>		<p><i>a graduate student manual, annual orientation sessions and an effort to streamline regular communications.</i></p>	
<p>14. Weakness: Both institutions should confirm a minimum support level for all enrolled students in full-time studies to meet appropriate standard of living. Enforcement in each department is necessary.</p>	<p><i>The OCGC will ask its member departments at Carleton to urge faculty to enable funding that covers the ~\$12k differential. However, this depends on research funding to the faculty member. This may also require rethinking of institutional support at both universities</i></p>	<p><i>Individual research professors and institutional funding (Carleton, UOttawa)</i></p>	<p><i>Research funding levels go well beyond the mandate of the OCGC and are controlled University and Faculty level policies and budgets as well as available funding to the individual researchers. Our students are supported by a range of mechanisms and partners, including federal research assistantships, major and minor scholarships, industry partners, and individual research grants. This both provides opportunity to students, but also disparity in funding levels. At Carleton we recommend a minimum 25K in funding per student, but this is ultimately the decision of the faculty members and students willingness to accept offered funding packages.</i></p>	
<p>15. Weakness: Both institutions should recommit to enforcement of milestones and early establishment of advisory committees. Enforcement in each department is necessary.</p>	<p><i>This recommendation dealt with enforcement of milestones and early establishment of advisory committees to ensure timely student academic progress. Criteria for student advancement within their programs at OCGC include (1) university requirements for academic advancement required of students through online documentation (i.e., requirements for research proposals/statements, timelines, milestones, annual progress reports, etc.) combined with discussion with their advisors; and (2) an OCGC-specific requirement; the graduate student seminar.</i></p>	<p><i>OCGC (each Dept cohort)</i></p>	<p><i>Enforcement of milestones is ongoing. Annual progress reports are mandatory, completed by all graduate students and their advisors and reviewed by the departments graduate advisor. If there is a lack of progress discussion are held with the student and supervisor. Additionally, extension request provide an opportunity to help mitigate issues when progress is delayed.</i></p>	

<p>16. Opportunity: Better web representation of the OCGC may help attract a larger and more diverse applicant pool for the graduate programs as well as help the current student population connect across the OCGC.</p>	<p>See #2, 3, 5, 11</p>	<p>See #2, 3, 5, 11</p>	<p><i>As noted above, improved communications and administration of the OCGC require a commitment of resources that have not been forthcoming. The department has made an effort over the past years to improve our website with the available resources we have. In addition, we have improved our presence on social media to improve recruitment and communication.</i></p>	
<p>17. Weakness: Insufficient orientation and introduction to people and facilities may be limiting students' abilities to access OCGC resources. If the current mode of communication is recognized as ineffective, it behooves the leadership/administration to try other modes.</p>	<p>For 1. Establish a 1-day Fall orientation meeting for all graduate students, providing tour of research facilities at both institutions, meeting with faculty, adjunct faculty, and staff, and including social engagement; also, establish a per-semester meeting of dept. grad supervisors with students as a "check-in".</p> <p>For 2. a) Moving members of the OCGC (100+ people) around for the day requires guaranteed funding for bus rental</p> <p>b) advertisement of people and facilities via website is the most efficient.</p>	<p>OCGC, institutional funding (Carleton, UOttawa)</p>	<p><i>It is not clear that any perceived lack of ability to access resources is due to insufficient orientation. Student appear aware of resources at the other university and particularly within research areas with complimentary disciplines at the other university, students are able to access resources.</i></p>	
<p>18. Weakness: Poor communication and uneven response to feedback has resulted in an erosion of trust. External mediation or the use of an ombudsperson role may be an effective mechanism for understanding the strong messages already revealed by student feedback. This is most urgent at Carleton.</p>	<p>See #13</p>	<p>OCGC</p>	<p><i>Students at Carleton have access to an ombudsperson and are made aware of this option, as well as other support services, through the annual orientation session and the graduate handbook.</i></p>	
<p>19. Weakness: Uneven application and enforcement of checkpoints appears to be allowing some MS students to function without adequate advising and progress support.</p>	<p>See #15: establish (if possible) even approach among sub-unit cohorts</p>	<p>OCGC</p>	<p><i>At Carleton, ongoing efforts are in place to monitor student progress through the use of progress reports that are required annually and extension request which are used when student need to extend their program time. However, as should be the case, faculty members are entrusted to mentor students, and graduate students are entrusted to take responsibility for their progress. Additional</i></p>	

			<i>bureaucracy is unlikely to improve outcomes for students.</i>	
20. Opportunity: The proposed relaxation of proposal approval (Volume 1 p. 41) would likely exacerbate the problem of students lacking feedback and support. Establish a mentor program for incoming students and exit poll strategy; this would be useful for tracking alumni also.	<i>Re-evaluation of academic success of students who submit MSc statements vs proposals; reinforce milestones, increase communication to students (e.g., Fall orientation) as in #15</i>	OCGC	<i>See #19</i>	
21. Opportunity: A general analytical methods course should be made available to graduate students (similar to what is already offered to undergraduates) so that they are better able to take advantage of the OCGC facilities.	<i>Available research infrastructure will be covered in the 1-day orientation day for all graduate students (see #17); need for specific research tools would be established by an advisory committee (see #15); website information will provide 1-stop-evaluation of what is available</i>	n/a	<i>Need for facilities is driven by research and is the responsibility of the students and their supervisors to identify needs and available resources. Although a general overview course may useful to some students, given the diversity of disciplines within the departments, it will likely be unhelpful, or moderately helpful to most. Given the already intense demands on student and faculty time, this item is unlikely to gain priority.</i>	
22. Weakness: Insufficient administrative resources for core functions of the Centre are contributing to poor communication and weak coherency of the Centre.	<i>Establish requirements for administrative support related to core functions of the OCGC: - website, annual collation of critical data about OCGC operations/success (e.g., enrolment, graduation, exit poll evaluations, publications, research funding, etc.)</i>	<i>Inter-institutional support is essential (3rd OCGC review report requesting such support)</i>	<i>As noted above. The value and function of the OCGC is not agreed upon between the two institutions and there has been no effort to provide additional administrative support to the Centre. The department has struggles through the effects of the Pandemic, which we are still working our way out of, and are additionally burdened with challenges resulting from budget cuts. As these challenges are brought under control we will endeavor to revive discussion with our partners at UofO with regard to the future of the OCGC.</i>	
23. Opportunity: Each department, and OCGC, should maintain a website which includes available tools and facilities, available training, contact information, pricing, and instructions for gaining access.	<i>See #2, 3, 5, 11</i>	<i>See #2, 3, 5, 11</i>	<i>See previous comments</i>	

<p>24. Opportunity: Formalizing the mechanism of joining the OCGC, recognizing new membership with meaningful introductions, and creating opportunities for developing relationships would greatly improve the faculty and adjunct experience, and thereby, the graduate student experience in the OCGC.</p>	<p><i>See #2, 3, 5, 11</i></p>	<p><i>See #2, 3, 5, 11</i></p>	<p><i>See previous comments</i></p>	
<p>25. Opportunity: We recommend that units agree on a unified EDI plan which would apply to hiring and student recruitment.</p>	<p><i>Establish an EDI plan in discussion with members and that is compatible with evolving plans within both universities.</i></p> <p><i>a) one component already defined: seek equity in funding and meeting minimum funding needs for students to increase graduate-school accessibility for diversity of economic and social backgrounds, gender, and race.</i></p>	<p><i>OCGC, Carleton, UOttawa</i></p>	<p><i>An EDI toolkit has been developed by the Faculty of Science that will be used to foster EDI principles in both, graduate teaching and research.</i></p> <p><i>Carleton orientation includes EDI training to all graduate students.</i></p>	