Queen's URGE Pod - List of continuing initiatives

Summary of Action Items

Executive Summary

This report is a result of activities undertaken by members of the URGE (Unlearning Racism in Geosciences) pod in the Department of Geological Sciences and Geological Engineering (GSGE) at Queen's University. Our pod participated in a curriculum hosted by the URGE leadership (https://urgeoscience.org/) over a 16-week period. Here, we highlight findings from our own extensive research, targeted literature review, group discussions, recorded author interviews, and a review of resources and data provided by the GSGE department, Queen's University. Our findings also highlight relevant research performed by other universities and research institutions participating in the same curriculum, and good examples of resources, policies, and supports that other institutions have implemented.

Over the course of this work, we evaluated the GSGE department's efforts to becoming anti-racist, comparing it other groups across North America and the globe, and to best practices outlined in the primary literature and by experts across various fields. This research uncovered some of the strengths as well as several challenges that our department faces in these efforts. With this report, we hope to highlight a number of ways that we can formalize and expand upon the ways the GSGE Department and Queen's University supports the admission, participation, inclusion, and retention of Black geoscientists, Indigenous geoscientists, and geoscientists of colour.

Short-term goals:

1. Internal documents:
    a. Resource page for students, staff and faculty encouraging positive and equitable relationships with underrepresented communities throughout research projects.
2. Update website:
    a. Resource page outlining resources and workshops available throughout the university
    b. Resource page for research with underrepresented communities.
    c. Resource page for incoming graduate students in the department.
    d. Increased transparency on expectations of incoming graduate students, and how to apply as a graduate student.
    e. Feedback form for input on the department website.
    f. Feedback form for EDI related complaints on the department website.
    g. Restructuring of resources to be more intuitive

3. Data collection of demographics and well-being within the department:
    a. Quantitative data collection of demographics.
    b. Qualitative data collection of well-being and belonging.
4. Hiring:
    a. Revise hiring rubric.
    b. Send out interview questions for faculty interviewees in advance of the interview.
    c. Broaden the places job advertisements are posted
5. Recruiting & supervision of graduate students:
    a. Develop a faculty cheat sheet with reminders at critical, subjective points in the hiring process.
    b. Sit-down agreement between supervisors and graduate students.
6. Establish a Grad Committee for fielding questions from incoming grad students

Long-term goals:

7. Graduate student recruitment:
    a. Reconsider recruitment efforts.
    b. Reconsider questions for official/online graduate applications.
    c. Reconsider the GPA threshold for admission to graduate studies.
    d. Language requirements?
    e. Scholarships for international students?
8. Graduate student funding:
    a. Reconsider funding for graduate students to offer more competitive packages.
    b. Provide transparency in funding systems within/between lab groups.
9. Hire a consultant to further investigate avenues for our department to continue improving, highlight bottlenecks/barriers, etc.
10. Update departmental safety protocols
    a. Ensure field and lab safety manuals cover mental as well as physical hazards
    b. Ensure field course and lab instructors are appropriately prepared and trained
    c. Develop safe and effective feedback strategies for EDI related concerns within the department
    d. Ensure field and lab work participants are given appropriate field and lab resources.

Extended goals w/ rationales

Short-term goals:

Internal documents:
1. **Resource page for students, staff and faculty encouraging positive and equitable relationships with underrepresented communities throughout research projects.**
   a. *Rationale:* To encourage better, more equitable relationships with underrepresented communities, and to facilitate this by providing necessary background knowledge, best practices, resources, and actionable items to researchers.
   b. *Sample content*: **(i)** brief introduction/background to the importance of developing equitable relationships with underrepresented communities throughout research projects and beyond, **(ii)** list of best practices, **(iii)** list of relevant academic papers, **(iv)** links to relevant web pages of resources, organizations, individuals, etc.
   c. *Working with Indigenous peoples:* There is a wealth of information on the website for the Four Directions Indigenous Student Center; this information does not have to be reproduced, but can be linked to the department resource page. Ideally, multiple links should be provided to indicate the various important aspects to consider when working with Indigenous people(s) - this may help to showcase the health and breadth of information available, to direct researchers to investigate the main priorities to consider when collaborating with Indigenous peoples, and to encourage visitors to the Department resource page to fully delve into the available information. Some of the available information: **(i)** [information regarding workshops held by Four Directions](), **(ii)** information regarding [land acknowledgements](), and a [map of territories](), **(iii)** [research ethics](), **(iv)** an [Indigenous community research partnerships training course](), etc. This is not meant to be a comprehensive list of available resources, and more resources can be linked to as appropriate. There are also numerous other resources and models that can be implemented, such as the [CARE principles for Indigenous data governance](), and the [FAIR model]() for scientific data management and stewardship. There are also primary literature papers that further delve into these models and can provide more insight (e.g. [Wilkinson et al. (2016) Sci Data](), [Carroll et al. (2021) Sci Data]()).
   d. *Working with underrepresented communities:* There are some resources available through the university webpages: **(i)** [anti-racism/anti-oppression]()

[resources](#) (through the university), **(ii)** [anti-racism/anti-oppression resources](#) (through the city). Unfortunately there isn't more direct guidance from Queen's University on how to establish positive relationships and engage in equitable and ethical research with racialized communities (with the exception of Indigenous communities through Four Directions). There is room for growth in this respect throughout the University. However, some general guidance listed below that is informed from research of primary literature and of listening to expert opinion.

e. *Common themes/conclusions/recommendations when working with racialized communities:* **(i)** when collaborating with underrepresented communities, approach with the understanding that it takes time to build a relationship and build trust. It is important for researchers to understand the position they are coming from when reaching out to/collaborating with underrepresented communities, and that depending on the position that they are approaching from, it might lengthen the time to build that trust, **(ii)** refer to communities how they would like to be referred to (e.g. Indigenous, First Nation, etc.). This information can often be found online or by calling a local community resource after-hours and listening to the outgoing voicemail, **(iii)** when collaborating with underrepresented communities, build the project together and include member(s) of the community in the project officially, such as a co-PI, co-author, etc. Recognize that this will invariably increase the lead-time at the beginning of a project, **(iv)** when building proposals and projects together, there should be a focus on recognizing and respecting the wants and needs, and achieving the goals of the community through the project, **(v)** communication should be consistent throughout the performance of the project, to ensure that the project is continuing to achieve the goals of the community, and modify as appropriate **(vi)** communication should be in-person whenever possible, **(vii)** results of the project should be communicated with the community directly, **(viii)** when communicating with a community, there should be an understanding that it may take time for a response. This is particularly true if it is currently a busy season for the community (e.g. hunting season). Patience should be exercised throughout communication, and there should be time built into the project to allow for this. **(ix)** in communications about the project and/or when presenting results, communication should avoid jargon and abbreviations whenever possible and be accessible to the audience & wider public. Heavy use of jargon and technical terms can be interpreted as upholding a language barrier and/or condescending. Translate material as appropriate. **(x)** in communication, use local words for locations, etc. whenever

possible, **(xi)** uphold respect for other ways of knowing/traditional knowledge, **(xii)** define, recognize, respect, and protect data sovereignty for the collaborating community(s) (see the previous section that references the CARE data policies), **(xiii)** all work should be appropriately compensated, **(ixx)** funding should be allocated for local participation/discussion/dissemination of project results to the collaborating community(s), **(xx)** funding should be allocated so that collaborating members of the community(s) can participate in education, symposiums, conferences, etc. as appropriate and according to the wishes of local collaborator(s), **(xxi)** researchers are encouraged to educate themselves and their teams whenever possible, without an expectation that the community(s) will educate them.

Website Updates:
1. **Resource page for amplifying available resources to further knowledge on how to conduct research and teaching in a more equitable way, and how to foster a more equitable, diverse, inclusive, and supportive environment in research groups, research projects, and classrooms.**
   a. *Rationale:* Universities conduct business within classrooms, labs, lab groups, departments, and within the community. In order to foster positive, equitable, diverse, inclusive and supportive environments when conducting this business, it's important that members of the University community are equipped appropriately. The department can help to facilitate this process by providing the necessary background, resources, best practices, and actionable items to researchers.
   b. *Sample content:* **(i)** links to available workshops through the university, e.g. **(i-a)** land acknowledgement workshop, **(i-b)** cultural safety and Kairos Blanket exercise, **(i-c)** from diversity to inclusion in the workplace certificate, **(i-d)** intercultural awareness certificate, **(i-e)** inclusion and anti-racism workshops, **(i-f)** employment equity training to ensure that individuals on hiring committees and/or in a position to promote employees are equipped to engage in employment equity practices, **(i-g)** equity and inclusion training for senior administrators, **(i-e)** positive space information session. **(ii)** can also provide links to resources, workshops, and courses outside of Queen's University. For instance, YOUTHREX hosts a free certificate course on '*Centering Black Youth Wellbeing: A Certificate on Combating Anti-Black Racism*'. This course is specific to individuals that work with Black youth in Ontario, which is highly relevant for working in a university environment with undergraduate and graduate

students, and specific to our geographic location whereas other resources are more generalized or specific to the US.

- c. *Notes*: This is not meant to be a comprehensive list, and more resources can likely be added. Workshops are already held regularly throughout the school year. Attendance rates of members of the department might be improved by highlighting a few sessions where the department encourages groups from the department to attend (e.g. through email reminders). The department would likely benefit from regular reminders to students, faculty and staff about the available workshops to accommodate the continual influx of graduate students and new faculty and staff. Could be planned to coincide with the orientation of incoming graduate students. The intended audience should also accommodate incoming faculty, staff, etc., or existing faculty, staff, etc. that would like to attend. Any references to Black and/or Indigenous peoples, and other similar groups should be capitalized (**B**lack, **I**ndigenous, **I**nuit, etc.).

2. **Resource page for incoming graduate students in the department.**
   - a. *Rationale*: To provide greater transparency when recruiting graduate students, providing them with an opportunity to be better informed about the department, school, and community before accepting an offer.
   - b. *Sample content*: **(i)** list of available resources in the department (equipment, labs, etc.), **(ii)** costs associated to applying, **(iii)** housing resources, **(iv)** cost of living, **(v)** list of important university-run organizations (e.g. QUIC), **(vi)** links to webpages for student-run clubs, **(vii)** links to important community-run organizations, etc. to help communicate the available resources to establish a sense of community.
   - c. *Notes/alternatives*: Some of this information might be helpful in video-form (Queen's Biology did something similar for the incoming grad students in 2020 because of COVID-19: https://www.youtube.com/watch?v=40mztDUaXVU). Some of this information may also be useful and of interest to incoming faculty. Some of this information might be better situated on a main Queen's webpage that we can link to. This would be a longer-term goal/the responsibility of Queen's University.

3. **Increased transparency on expectations of incoming graduate students, and how to apply as a graduate student.**
   - a. *Rationale*: This information is preferentially available only to individuals with mentors that have a graduate degree(s), and particularly undergraduate students of our department specifically. This causes inequities in who applies to be a graduate student at our department.

b. *Sample content*: **(i)** increased transparency on how to apply to be a graduate student in our department (email faculty directly, typical application timelines, etc.); this information should be transparent, easily find-able on the department website, and plainly worded. Consider including a statement cautioning prospective graduate students against submitting a formal application and paying the $105 fee without a supervisor lined up. **(ii)** increased transparency about the academic requirements, including standardized tests such as GRE or IELTS. Any potential leniency with respect to the posted minimum GPA should also be mentioned. **(iii)** increased transparency regarding any language requirements for applicants and any potential leniency regarding requirements.

4. **General feedback form for input on the department website.**
   a. *Rationale*: Improving the accessibility, inclusivity, and transparency of the website & of the department will invariably and inevitably be an iterative process. This may help to ensure accountability of the website, and by extension the department, to remain accessible, inclusive & transparent, as well as demonstrate through action to potential incoming students, staff, and/or faculty our commitment to continually improving our department, website, etc.
   b. *Sample content*: **(i)** A potentially anonymous feedback survey for the department website. Could be restructured from the current feedback survey used on the Inclusive Geo page.

5. **EDI specific resource page and feedback form on the department website.**
   a. *Rationale*: The Inclusive Geo page has outgrown its current structure. Resources related to EDI matters should be organized in a clear and accessible manner for all students, staff and/or faculty. Given the current small and close-knit department structure, difficult conversations regarding EDI matters can be challenging for individuals to bring up for fear of backlash. Our department should provide students, staff and/or faculty with a method for bringing these issues to the attention of the department.
   b. *Sample content*: **(i)** list of EDI related resources **(ii)** Common FAQs regarding reporting of EDI issues **(iii)** Outline of formal reporting procedure (involvement, timeline, etc.) **(iv)** Potentially anonymous feedback form for EDI related concerns within the department.
   c. *Notes/alternatives*: The new Queen's University Harassment and Policy, which has not been updated since 2000, is stated to be released in early 2021, however this date appears to be delayed. Once the document is available, it should be summarized and linked on the page (similar to examples below). The Queen's Civil Engineering department has created

the following feedback form ([CIVL Staff/Faculty](#)). The University of California, Berkeley Earth and Planetary Science department has already created both these resources, which can serve as templates for implementation for GSGE. EDI resources ([Resources | Earth and Planetary Science](#)), anonymous feedback form (https://docs.google.com/forms/d/e/1FAIpQLSeaS5r7NWsCX85dEvSWY5qI7LoWzUJLodCroMymtrCIu5qFNw/viewform)

Data collection of demographics and well-being within the department:
1. **Quantitative data collection of demographics.**
   a. The department should either work internally or with the faculty/university to ensure the collection of demographics data that can be specifically subdivided to the GSGE level. We advocate that this data be made publicly available, however if it is only available internally it could serve numerous beneficial purposes, as outlined below.
   b. *Rationale*: **(i)** Initiatives to improve the equity, diversity & inclusivity of the department are most effective when the current situation is well defined, **(ii)** continued development of new EDI-related initiatives in GSGE will be furthered by data aiding in the identification of systematic barriers and biases (see [Ontario Human Rights Commission](#)) within the department as opposed to at the university as a whole (e.g., the potential physical, mental, and economic barriers of geologic field courses/work), **(ii)** evaluation of the effectiveness of initiatives to improve equity, diversity & inclusivity within the department cannot be performed without first establishing a baseline, and without continuing data collection, we cannot continue to re-evaluate.
   c. *Sample data collection*: **(i)** audience: undergraduate students, graduate students (by degree), postdocs, faculty, staff, visiting speakers to the department, **(ii)** data: race, ethnicity, gender, etc., **(iii)** time to degree. **(iv)** participation in research activities, **(v)** degree completion, **(vi)** years retained (for faculty, staff, maybe postdocs), **(vii)** received funding/scholarships, **(viii)** lateral movement (into & out-of-the department part-way through a degree, post-doc, or professorship), and **(ix)** potentially qualitative data on well-being (see bullet (2)).
      i. *Note regarding visiting speakers:* One of the easiest initiatives on this front could be the collection of (voluntary, see point (e)) demographics data on visiting speakers in GSGE. Such data collection could even be retroactive, with the department reaching out to speakers from the last 5 years as numerous other URGE

pods (e.g. McGill) have documented they plan to do or have already started doing. Numerous departments already collect this data with various methodologies (e.g., pre-talk, post-talk surveys, etc.), with most collating data into one or more year datasets to address anonymity concerns. Appalachian State Universities Department of Geological and Environmental Sciences has a great example of the collection and utility of the data, which they have collected as far back as 2014. This data would be particularly useful in helping create a more diverse seminar series within GSGE, which would help increase the sense of belonging of underrepresented students. Such a push could easily build off successful programs at countless other institutions (e.g., Columbia University or UMass Amherst)

d. *Role of GSGE in data collection:* We recommend that GSGE **(i)** work hand-in-hand with various levels of the university and **(ii)** advocate for advancement of this issue at various levels within and outside of Queen's. This is because **(iii)** the department will benefit from being able to compare data between related departments at Queen's and **(iv)** because, to our knowledge, no nation-wide data exists on the diversity of the Earth Sciences or Earth Science departments in Canada. National discipline-specific data on the diversity of the geosciences in the U.S.A. has been collated by multiple organizations (e.g., AGI, AGU, GSA, NSF and other federal government bodies). That data has been publicly made available for multiple decades. It has been the focus of numerous reports, studies, and opinion pieces (e.g., AGI Geotimes 1972 and GSA Today 2021) that highlight ongoing initiatives, positive steps, and areas for continued improvement (e.g., Bernard and Copperdock, 2018, Nat. GeoSci). No such data exists in Canada which makes it difficult to measure the success of Canadian Earth Science departments EDI-related initiatives. Collection of this data by a group such as the Council of Chairs of Canadian Earth Science Departments, which already collects gender data, or the Geological Association of Canada, would be a way to overcome this. Collection of this data in GSGE and at Queen's would allow GSGE to advocate for and provide guidance to other universities nationwide to help develop such a dataset. This would also allow comparison to diversity data for Canadian geoscience-related industries, which is increasingly being collected and made publicly available (e.g., mining or petroleum).

e. *Utility of collected data:* The collection of this data must be mindful **(i)** of privacy and personal choice (see point (g)), **(ii)** to collect data systematically (e.g., collect similar data to the university as a whole or

follow the policies used by Statistics Canada during the census)**,** and **(iii)** that there must be clearly defined goals to use the data (i.e., data is not just being collected for data's sake). Goals for improvement, benchmarks for "successful" demographic equity, and timelines for the reassessment of data should be outlined and evaluated regularly (e.g., see previously linked AGI and GSA reports). Benchmarks other departments/URGE pods have outlined include (but are not limited to) the retention rate of BIPOC students at the same rate as white students, demographic makeup of speakers should match either department of university student body or national discipline makeup, etc. Other URGE pods have taken other possible routes. For example, Colgate University outlined that "Demographic information for students enrolled in Geology and Geography department courses... [from University Registrar] over the past 10 years has been requested and… will help identify which courses or sequences serve as gateways for minoritized students to the geosciences, and which serve as obstacles to advancement and retention."

f. *Example:* The Northern Arizona State School of Earth and Sustainability URGE pod has compiled a comprehensive example of a university and geosciences unit where this data is collected and results are [made publicly available here](). These data include departmental undergrad vs graduate student demographics, visiting speaker demographics, demographics for a general education first year geoscience course (not publicly available but used internally) highlighting achievement disparities between different demographics, and data on qualitative aspects of department life (e.g., "how open do you feel [the department] is to diversity and inclusion", and whether their stipends were sufficient (imposed an economic barrier to success).

g. **NOTE:** *All demographics data should be optional and self-reported*. Consider making this information transparent. At the public level, this may help to maintain transparency with incoming students (undergrad & grad), faculty, staff, etc. about the condition of our department, our stance on equity, diversity & inclusivity, and the actions that we are taking to improve. The department may also want to be mindful of privacy concerns in small sample sizes. Clearly defined policies for practices such as cohort averaging (e.g., 3-4 year rolling averages) may help alleviate some concerns.

2. **Qualitative data collection of well-being and belonging.**
   a. *Rationale:* Increased diversity alone does not directly lead to increased inclusivity and well-being; a sense of support and community is also necessary to maintain a sense of well-being and belonging. A strong

sense of well-being, belonging, and support in undergraduate students, graduate students, postdocs, staff, and faculty can facilitate an increased quality of work due to the reduction of environmental stressors, promote the retention of talent, and in turn promote the hiring of new talent through building a reputation as a diverse, inclusive, equitable, and supportive department.

b. *Sample data collection:* Numerous options are available. These include **(i)** regular (e.g. yearly) surveys inquiring about individuals' sense of comfort and inclusion within the department. Data can be related to degree level in order to help direct improvement efforts where they are most needed (e.g. undergraduate, graduate, postdoc, staff, assistant faculty, associate faculty, full faculty, etc.). Likewise, data can also be related to demographics (refer to previous section) or can include an open comment section where individuals can suggest specific areas for improvement and/or ways to improve. An alternative that numerous URGE pods and departments are working towards are **(ii)** anonymous exit interviews or surveys and the conclusion of degrees, contracts, appointments, etc. These surveys have numerous stated goals that include assessing undergraduate experiences and whether the department fosters an inclusive environment, whether diversity goals are met, and what barriers or obstacles community members would recommend addressing. **(iii)** Students in the department could be encouraged to use the online feedback form (see Website Updates - bullet 4) at the end of semester. **(iv)** Closed door "city hall" style meetings open only to students and the department head.

c. *Notes:* Surveys should be made anonymous, or have anonymity be an option. All individuals should be self-identified. Surveys do not need to be self contained. The department and Queen's could work towards including questions on these fronts on pre-existing surveys; e.g., the [Canadian Graduate Professional Student Survey](#) that Queen's administers, or through working with the Queen's Human Rights and Equity Office to gather the appropriate data through a format such as their [Exit Survey](#).

d. *Example:* The Northern Arizona State School of Earth and Sustainability URGE data [made publicly available here](#) include some qualitative EDI related data collection. The Queen's Civil Engineering Department has previously hosted department closed door "city hall" discussions where students can verbally address concerns directly to the department head without repercussions - which anecdotally has increased the students' trust in the department.

Hiring within the Department:

1. **Revise hiring rubric.**
   a. *Rationale:* A fair, equitable, and rigorous rubric is a great way to assess applicants based on performance, and discourage inclinations to hire based on the perceived 'fit' of an applicant.

2. **Send out interview questions for faculty interviewees in advance of the interview.**
   a. *Rationale:* Faculty applicants with mentors that are faculty have an advantage when navigating the interview process for faculty positions. This inevitably leads to inequity considering the current landscape of academia, and GSGE in particular. Sending out interview questions in advance, and informing applicants of what to expect prior to the interview will help to balance out this inherent inequity.

3. **Broaden the places job advertisements are posted**
   a. *Rationale:* Reaching a broader audience is an important way to expand who applies for our position and will lead to more applicants. Targeting diverse listservs and organizations will bring in a more diverse applicant pool and show applicants that diversity is valued.
   b. *Notes:* some options include SACNAS (https://www.sacnas.org/) , National Association of Black Geoscientists (NABG; http://nabgcareers.blogspot.com/), Earth Science Women's Network (ESWN; https://eswnonline.org/).

Recruiting & supervision of graduate students:

4. **Develop a faculty cheatsheet with reminders at critical, subjective points in the hiring process.**
   a. *Rationale:* The process for hiring graduate students is inherently subjective. In order to improve the equity, diversity, and inclusivity in graduate studies, the hiring process itself must be as equitable and inclusive as possible. This requires the participation and support of individuals that are in the position of hiring graduate students.
   b. *Sample information:* A cheatsheet with information, statistics, and recommendations on how to reduce personal subjectivity when hiring, and that identifies the moments of greatest subjectivity during the hiring process, may help to decrease inequity in the hiring process. Reminders set up at each of the subjective checkpoints during the hiring process may help to remind and reinforce these principals. A yearly email to individuals in the position of hiring graduate students may act as an additional reminder, and ensure that incoming faculty are also made aware of the

initiatives of the department. Can be sent out around the time that most faculty are planning to hire graduate students.

- c. *Notes/alternatives:* Best practices for hiring graduate students can also be incorporated into information packages for incoming faculty/any individuals that are in the position of hiring graduate students. Consider providing additional resources for first-time faculty in how to go about hiring graduate students.

5. **Sit-down agreement between supervisors and graduate students.**
    - a. *Rationale:* The relationship between supervisors and graduate students is crucial for both parties.
    - b. *Sample points:* **(i)** funding, **(ii)** expectations regarding deliverables such as publications, conference presentations, etc. (including funding for conferences, etc.), **(iii)** fieldwork, labwork, hard skills to be learned, **(iv)** available training for fieldwork, labwork, etc. **(v)** if appropriate, expectations regarding hiring field assistants, etc.
    - c. *Notes/alternatives:* Ideally, the format of sit-down agreements would be consistent across the department, with enough flexibility to address the various projects that graduate students will be working on. Alternatively, this form can be developed at the departmental level and made available to graduate supervisors that wish to implement it.

6. **Establish a Grad Committee for fielding questions from incoming grad students**
    - a. *Rationale:* Incoming graduate students might feel more comfortable asking questions of existing graduate students than their supervisors. A number of the concerns of incoming graduate students might be shared, regardless of the discipline or supervisor. If questions can't be answered by the graduate committee, the graduate committee can likely find the information more easily, or put the incoming graduate student in contact with the appropriate individual/group.

Long-term goals:

Graduate students recruitment:
1. **Reconsider recruitment efforts.**
    - a. *Rationale:* How graduate students are recruited, and where they are recruited from, can pose a barrier to diversity in higher education. Alternatively, it can extend a barrier to diversity earlier in the education pipeline into graduate studies. For instance, if graduate students are preferentially selected from an existing, limited, pool of undergraduate students (such as undergraduate students within the department), any barrier to diversity into the undergraduate

program in the department would be extended into the graduate programs within the department.

  b. *Sample action:* Widen the candidate pool for graduate students. Encourage faculty to hire graduate students from outside of the department. Encourage faculty to advise interested undergraduate students to apply for graduate studies outside of the department. Keep departmental website up-to-date with posted advertisements for graduate students. Review the postings regularly (e.g. every semester) to ensure that they are up-to-date.

  c. *Notes/alternatives:* An ideal solution would simultaneously widen the candidate pool for graduate students, encourage lateral movement between institutions between degree levels, improve diversity and inclusion, and lessen the workload of faculty when filtering graduate school candidates.

2. **Reconsider questions for official/online graduate applications.**

  a. *Rationale:* The current application form for graduate studies into the department includes a 'Personal Statement'. The request for a 'Personal Statement' is vague and does not provide much information on what reviewers are looking for students to discuss. Students with a mentor(s) that have attended graduate school may be at an advantage when writing this 'Personal Statement', which creates inequities in the application process.

  b. *Sample question set-up:* More detailed instructions on what is expected for the 'Personal Statement' can help to minimize inequities in the application process. These questions should be universal and centralized within the department. For instance, faculty can get together and decide on a list of points they want to see addressed in the Personal Statement, and the application can explicitly state for the applicant to address these points. Alternatively, these questions can be asked separately in the application form, with individual input fields for each specific question, without a centralized 'Personal Statement'.

3. **Reconsider the GPA threshold for admission to graduate studies. Reconsider using a GPA threshold at all for admitting graduate students.**

  a. *Rationale:* It has been demonstrated that centralized testing is not indicative of the performance of graduate students once admitted. While having a GPA threshold is convenient for shortening the list of applicants, this step can create inequities.

Graduate student funding:

1. **Reconsider funding for graduate students to offer more competitive packages.**

  a. *Rationale:* Strong funding packages can help to attract and retain talented students, staff, and faculty.

  b. *Sample action:* Can compare funding packages within the department to other, similar departments across universities.

2. **Provide transparency in funding systems within/between lab groups.**

  a. *Rationale:* Maintaining consistent funding for similar work/experience is a baseline of equity. Maintaining transparency in funding within & between

departmental groups can help to communicate that consistency and build trust within the department regarding fair funding.

  b. *Sample action:* Can publish official funding packages for all graduate students within the department, with the explicit expectation that faculty follow the funding packages.

Hire a consultant to further investigate avenues for our department to continue improving, highlight bottlenecks, etc.
- *Rationale:* An outside perspective from an individual trained in evaluating EDI concerns within an educational/departmental environment is crucial for continued improvement regarding equity, diversity, and inclusion. A consultant can help in identifying areas for improvement, setting priorities, suggesting concrete action items, establishing firm goals and developing a continuing action plan.
- *Suggesting action:* An internal consultant to Queen's could be possible. Alternatively, there could be an option to hire an external consultant.

Update Department Safety Protocols:
1. **Ensure field and lab safety manuals cover social as well as physical hazards**
   a. *Rationale:* Hazards extend beyond the scope of physical safety, and can take many forms within workplaces, when performing fieldwork, etc. It's important to also address and minimize these hazards when running labs, offices, fieldwork, etc. to ensure all students or participants experience a safe and comfortable learning environment.
   b. *Sample content*: **(i)** Develop field and lab safety manuals that include other forms of risk besides physical (e.g., Psychosocial Hazards, Mental Health, Workplace Violence, Discrimination, and Harassment, etc.). **(ii)** Address how race based discrimination or abuse is a safety concern that warrants specific attention and discussion prior to and during work. **(iii)** Students should be required to work in groups or pairs whenever possible. **(iv)** Field and lab safety manuals must go beyond discussing hazards, and present realistic plans for handling and mitigating risks. **(v)** Safety manuals must be explicit in communicating who individuals can raise concerns to beyond the programme leader before, during, and after fieldwork has occurred. **(vi)** Daily "safety moments" must be included in the field schedule before field work begins. **(vii)** Lab and safety manuals should be reviewed every 3 years at a maximum to ensure they are up to date.
2. **Ensure field course and lab instructors are appropriately prepared and trained**
   a. *Rationale*: Lab heads and field course instructors need to be appropriately prepared to guide and help students handle physical and emotional

hazards. It is the responsibility of both the department and the instructors to ensure they are prepared to handle difficult situations.

b. *Sample content*: **(i)** Field course instructors should be given appropriate training (ex. Wilderness First Aid, De-escalation Training) to handle physical and mental hazards in the field. The Queen's University Human Rights and Equity Office offers a variety of non-technical training courses ([Education | Human Rights and Equity Office](#)). Similar training for lab relevant scenarios should be required **(ii)** Field instructors should introduce themselves to and must respect the local inhabitants in and sound the field site.

c. *Notes*: Field sites should be well researched and understood from a technical and non-technical perspective before any field work takes place. Instructors should be encouraged to contact others who are currently or have previously worked in the area

3. **Development of safe and effective feedback strategies for EDI related concerns within the department**

   a. *Rationale*: Students need to be provided communication outlets when they are dealing with an EDI issue related to the department. Currently, there is no formal process for students to report EDI issues in-person, or online (anonymous or otherwise)

   b. *Sample content*: **(i)** Semi-regular safety meetings should be occurring between trip or lab leaders and participants, and continuous open discussion and communication should be encouraged. **(ii)** Ensure the department provides a list of safe contacts that students can reach out to in the case that they don't feel comfortable approaching their supervisor or instructors. This would be in addition to the anonymous feedback forms discussed under *Website Updates.*

4. **Ensure field and lab work participants are given appropriate field and lab resources**

   a. *Rationale*: The department is responsible for the students' safety while they are within the department or out in the field. Many students are intimidated by the prospect of field work and the department should provide various resources to support a safe and comfortable learning environment.

   b. *Sample content*: **(i)** Lab and field safety manuals should be reviewed and agreed upon by all participants before any work is conducted. The scope of any fieldwork should also be reviewed and agreed upon before any work begins **(ii)** Physical copies of lab safety manuals should be readily accessible by individuals in the lab. Digital copies should also be provided

before any work begins. **(iii)** Physical and digital copies of field safety manuals should be provided to all participants before any field work occurs. **(iv)** Field work participants should be given appropriate scientific equipment to ensure they are safe and identifiable (ex. Hard hat, hi-vis, credentials, bumper stickers, etc.). **(v)** Students should be alerted to field and lab related training experiences that are relevant to them.

c. *Notes*: When working on or nearby the university campus, students should be made aware of the services and resources provided to them to ensure they are safe and comfortable (ex. Queen's SeQure mobile app for working alone, Queen's Walkhome Service for traveling in the evening).