Redesigning Graduate Admissions in the School of Oceanography with a Diversity, Equity and Inclusion Lens

A report to the faculty from the School of Oceanography Diversity, Equity and Inclusion Committee

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1. Introduction

The School of Oceanography Diversity Equity and Inclusion Committee (DEI) was created in Fall 2019 and we were charged to first tackle a redesign of our graduate admissions process with DEI issues in mind. There are moral, societal and selfish reasons for focusing on this issue first. We frame this imperative with two quotes from experts:

*However, society is changing. The labor market for PhDs is changing. And higher education is changing, too, both intellectually and demographically. If doctoral education and our means of identifying talent do not change with them, it will be doctoral education and the professoriate that fail by falling behind, not our students. Re-creating academic programs and disciplines in our own image may be the natural tendency, but in a changing world—one that is more diverse, more collaborative, more interdisciplinary—stewardship of our disciplines’ futures means being flexible to recognize what the world needs from our fields of study and adapting our ideals of excellence accordingly.*  
Posselt (2015)

*The geosciences tackle the complexities of the Earth. Geoscientists also study how we, as a society, affect — and are affected by — the planet we live on. Complex problems that influence all segments of society, such as demands on diminishing natural resources and climate change, require the ingenuity of investigators with a broad variety of backgrounds. Increased diversity has clear benefits for scientific advancement: different perspectives and life experiences spark unique questions and approaches to problem solving. Collaborations involving a diverse group of people are more creative at tackling problems and lead to higher levels of scientific innovation. Nevertheless, the geosciences are the least diverse of all STEM (science, technology, engineering and mathematics) fields.*  
Bernard and Cooperdock (2018)

This report represents work that is needed to build a more inclusive and supportive environment for graduate students within the School. In addition, it provides a basis for the School of Oceanography’s application to the AGU Bridge program that will help us to increase the number of students from underrepresented racial and ethnic groups in our program.

The AGU Bridge Program [https://www.agu.org/bridge-program](https://www.agu.org/bridge-program) will provide us access to applications of under represented minorities before they apply to graduate school. This signals
to the applicants that we recognize the importance of building a more diverse oceanography workforce, and that we are actively working on changing our departmental culture.

2. Website Changes

The first interactions that applicants have with the SOO is our website and the application itself. We outline changes in our website that are already underway in coordination with the SOO web team that will provide all applicants with the information they need to craft successful applications. We aim to have these changes completed by the end of the summer 2020.

- We will create a page that showcases research areas of each option, current projects in each lab group, and testimonials and pictures of current graduate students. This will allow students the opportunity to determine whether their interests fit within the research that is done at UW.
- A new student life page will be created with a spotlight on Seattle, graduate student events, and the ARGO RSO.
- The current graduate page (https://www.ocean.washington.edu/story/Current_Graduate_Students) is already being revamped and streamlined. All files within the page are in the process of being updated to reflect current course offerings and processes. Current graduate students will be asked to fill out a questionnaire and submit a photograph for a new “current student spotlight” to be featured on the main page of the website. This spotlight will rotate twice monthly. By providing a clear picture of the program, our four options, and life as a current graduate student in Seattle, the program will be more inviting and competitive.
- We have already begun revisions to the Prospective Graduate Student page (https://www.ocean.washington.edu/story/Prospective_Graduate_Students). Once the new application timeline is approved, we will include a guide and an FAQ about how the application process works. This will be written by current graduate students with additions from faculty. An example of information that will be made visible is the importance of reaching out to faculty prior to applying.
- Additional information such as a summary of the application process and our approach to holistic admissions will be described.
- The typical academic backgrounds of current graduate students will be summarized.
- We will link to information from the UW Graduate School on minimum admission requirements (https://grad.uw.edu/admissions/understanding-the-application-process/#Minimum%20Admissions%20Requirements).

3. Changes to the application

We propose changes in the application itself with diversity, equity and inclusion in mind. These changes range from dropping the GRE as a method of evaluating students to making explicit what information makes a successful application.
• We recommend dropping the GRE as a method of evaluation and changing the application such that it will not be possible for students to submit their scores. The GRE is not a predictor of success for matriculated graduate students as measured by grades during their first and second years, the number of first authored papers published during or after graduate school, nor do they predict whether or not students finish graduate school (Hall et al, 2017; Moneta-Koehler et al, 2017; Petersen et al, 2018; Sealy et al, 2019). Undergraduate GPA is a better predictor of success than the GRE (Miller et al, 2019). This will follow numerous other graduate programs both within and outside of the geosciences that have dropped consideration of the GRE in application review (Langin, 2019). Finally, GRE is a barrier to diversity because of the cost of the test itself, the cost of test preparation services, and the access to testing outside of major metropolitan areas.

• We recommend creating an obvious link where students can request a waiver of the application fee through the graduate school https://grad.uw.edu/admissions/application-fee-waivers/, and if students do not qualify for this waiver, an obvious path for requesting that the fee be covered with departmental resources.

• We recommend that the application prompt for the essays be revised to encourage the students to both describe their research interests and to give them an opportunity to add a personal statement. The second statement would encourage students to explain any circumstances that may have affected their academic studies and provide insight into how their background will add to the community of the school. This will also provide an opportunity to share how their intended research interests and/or community involvement has the potential to increase diversity and equal opportunity in higher education. A revised prompt can be found in Appendix A.

• An example resume/CV will be provided where students can clearly summarize their experiences. This will replace the “fill in the box” approach that is the default in the current application (Appendix B).

4. Holistic admissions
The revised application will allow faculty to get a more complete picture of the background and experiences of applicants, and allow more equitable evaluation. To this end, we propose a move towards a holistic admission process. This process will emphasize the whole individual applicant rather than relying on a specific subset of criteria. This process acknowledges that there are many ways that individuals may manifest their skills and knowledge [Oregon State University Holistic Admissions Working Group: https://gradschool.oregonstate.edu/faculty/holistic-admissions]. Formalizing the process of this assessment allows the School of Oceanography and individual faculty to better eliminate our unconscious biases and thus admit and recruit a more diverse pool of excellent graduate students. The first step is the creation of an explicit admissions rubric. We present one adapted from those of several other departments
Admission Rubric
This admissions Rubric is adapted from the one created by UW Atmospheric Sciences and the rubrics of other departments. We recommend that this rubric be used by faculty when evaluating students at each stage of the admissions process. We will revise this rubric each year to reflect our experience with this new method of admissions (Appendix C).

Application review
In order to support the goal of an holistic admission process, we recommend the following process:

The director along with the GPC will identify two faculty members from each option to independently review all of the applications to that curricular group. These reviewers should use the rubric to group the applications into four tiers:

- Tier 1: Strong application in all aspects; should thrive in any program
- Tier 2: Strong application in most aspects; average in others; highly likely to succeed in our program
- Tier 3: A mix of strengths and weaknesses (perhaps due to personal issues or access to opportunities); upward trajectory; may require extra coursework or attention from advisor to succeed
- Tier 4: Not likely to succeed. Not academically prepared; not clear on their reasons for pursuing graduate studies

In addition, each reviewer should indicate if there are other options that should review each application and pass those application to the other option representatives.

The evaluators will then compare rankings. If there are discrepancies in individual rankings, the GPC will act as a third reviewer.

Summary of admissions timeline
We support moving the application deadline to December 1, with a goal of admitting students before they are invited to our visit days. This will enable the visit to focus on recruitment rather than assessment. This requires that faculty who will be recruiting interview qualified applicants remotely before admission decisions are made in the first few weeks of January. To support this process, the proposed dates for recruitment are as follows:

- December 1: Applications due
- By December 15: GPC/GPA have completed assembling the applicant files, and identifying which options should review each application. The Director and/or the GPC will appoint two faculty from each option to independently review all option applicants using the rubric. These reviews will be completed by January 1. By January 7, Tier 3 applicants will be evaluated by the GPC and faculty representatives from the SOO
Diversity Committee to assess whether there are students that should be moved into Tier 2.

- By January 25: Choosing from Tier 1 and Tier 2, students are interviewed by faculty who are considering taking new students with suggested interview questions (Appendix D). Each faculty will take notes on the interviews, and these will be made generally available on specified aspects of the student’s experience and profile. This will not be a numerical ranking. The GPC and Diversity Committee members will identify qualified diversity applicants that should be interviewed.

- By January 31: Faculty across each option, and across the options when appropriate, meet to discuss all interviewed applicants. The applicants in tier 1 and tier 2 are sorted into 3 categories: 1. Admitted, 2. Waitlist, and 3. Not admitted.

- January 31 Admission decisions are made, all admitted are invited to visit. Waitlist letters are sent (see Appendix E for example waitlist letter).

- March 15: Rejection letters are sent.

5. Financial Support
The SOO should continue to prioritize financial support to increase the diversity of our student body.
- The SOO should provide $2000 to offset relocation/moving costs for all students.
- All existing scholarships and fellowships should be combined to provide one year of support for one or two underrepresented minority students. This flexible funding will allow the students to complete any coursework at the undergraduate or graduate level that is necessary for their success in the program, rotate through two or three labs to find the best mentor and research fit, and explore professional development or teaching opportunities on the larger UW campus.
- Selection Criteria for this support should include
  - URM heritage - Hispanic American, African American, American Indian/Alaska AND/OR LGBTQ and disability status
  - College Major in STEM Field with undergraduate GPA 3.0 in STEM courses
  - Demonstrated leadership ability
- The SOO will apply as a department for any resources available from GOMAP to support these students.

6. Retention Strategies
A sense of belonging and the support of peers is critical to graduate student success [Gardner, 2010]. We already have in place several programs that help to support and build community of our graduate student population including ARGO, first friday run by first year students, and the 1-2 credit OCEAN 506 that is offered each fall that provides all students the information they need to be successful in our program in addition to providing a framework for students who are
submitting NSF graduate research fellowship program applications. Current students are taking the lead to implement a peer mentoring program for all students that is outlined below. We will be continuing discussions on how best to support URM students in particular. Having layers of mentoring is a recommended practice to best serve student needs [APS Physics Bridge Program manual] and there is a critical lack of mentoring for students of color [Brunsma et al. 2017] and all students benefit from strong mentoring relationships. Peer mentor programs allow community building within the department and help provide a sense of belonging for first year students. Having a peer mentor provides another point of contact, who may feel more approachable than a faculty mentor, for first year students to bring up issues and ask questions. Note that a peer mentoring program doesn't preclude more mentor training for our faculty, which should still be a high priority.

We recommend the following
- All first year students should enroll in OCEAN 506 in Autumn as it not only provides a structure for applying for the NSF-GRFP for the first three weeks, it also provides all students the information they need to be successful in our program.
- Support the peer mentor program that is being led by ARGO both financially and logistically (Appendix F).
- Encourage faculty to engage in formal training in mentoring, including short trainings during faculty retreats and/or meetings.

7. Additional Strategies

We will continue to explore additional strategies for recruiting and retaining a diverse student population with the following strategies going forward
- Submit a strong AGU Bridge application in October 2020 so we will have access to the URM applicants before they apply.
- Reach out to the URM students who are currently enrolled at UW or at nearby institutions through the LSAMP program to provide school year and summer research experiences. This is a large program that links four Pacific Northwest Institutions. From their web site [http://depts.washington.edu/lsamp/](http://depts.washington.edu/lsamp/)
  The purpose of LSAMP is to integrate academic and social supports to build community, engage underrepresented minority (URM) students in undergraduate research, and increase their entry into advanced STEM degree programs and professional careers. By affiliating with LSAMP, current students have access to internships, paid research opportunities and much more.
- We are currently in discussions with COENV Diversity staff to create a cross-college URM peer mentoring program. They have agreed to provide financial and staff support. We will work on this once campus reopens.
Appendix A. Revised Application Prompt

Statement of Interest (required)

Instructions: Please respond to the following. Your statement can be up to 2 pages, single spaced, using 1-inch margins and 12-point font.

1. Describe your area(s) of interest, including any subfield(s) or interdisciplinary interests. We encourage you to indicate specific research interests and potential faculty mentors.

2. What additional information about your past experience may aid the selection committee in evaluating your preparation and candidacy? For example, you may wish to describe research, employment, community service, artistic or international experiences through which you have developed skills that would aid you in earning your degree.

3. What are your plans for your career after earning this degree? What knowledge and skills do you hope to achieve from the graduate program that will be useful to your long-term career goals?

Personal Statement (optional but recommended)

Instructions: Please respond to the following. Your statement can be up to 1-page, single spaced, using 1-inch margins and 12-point font. You do not need to answer every question; focus on one or more points that are relevant to your experience.

1. Are there educational, personal, cultural, economic, or social experiences, not described in your Statement of Interest, that have shaped your academic journey? If so, how? Have any of these experiences provided a unique perspective(s) that you would contribute to your program, field or profession?

2. Describe challenge(s) or barriers that you have faced in your pursuit of higher education. What motivated you to persist, and how did you overcome them? What is the evidence of your persistence, progress or success?

3. Have you engaged in scholarly discourse, research, teaching, creative efforts, and/or community engagement that have the potential to advance diversity and equal opportunity in higher education? How would you like to continue or begin to be involved during your graduate program?

Appendix B. Sample Resume/CV. On the website it will state that not we do not expect that there will be entries to all sections (i.e. there is no expectation that student will have had a publication or given presentations).
RESEARCH INTERESTS
Thermohaline Circulation, Carbon Cycle, Climate Change

EDUCATION
MA in Oceanography, June 2020 – University of Washington.
BS in Oceanography, June 2019 – University of Washington.

RELEVANT EXPERIENCE
Research Assistant: University of Washington, School of Oceanography, September 2020 to Present.
Scuba Diving Instructor, Ocean Enterprises, Seattle, WA, September 2020
Community Organizer, Tacoma, WA, September 2020 to Present.

PUBLICATIONS

CONFERENCE PRESENTATIONS (ORAL AND POSTER)

TEACHING EXPERIENCE
Teaching Assistant, University of Washington
   · Oceanography, OCEAN 101

HONORS / AWARDS
Study Abroad Summer Grant, 2020
Teaching Award, 2019
Undergraduate Fellowship, 2018

OUTREACH ACTIVITIES / COMMUNITY INVOLVEMENT
Mentor, University of Washington, 2018
Library Acquisitions Committee, 2017
Undergraduate Advisor, 2014-2016
Tutor, 2018-2020

EXTRACURRICULAR ACTIVITIES
Band Member, University of Washington, 2018
Club volleyball, University of Washington, 2017
SPECIAL SKILLS
Scuba Certified
Proficient in Microsoft Excel, MATLAB, Python
Fluent in Spanish

EXTERNAL FUNDING APPLIED FOR
NSF-GRFP
DOE Fellowship

1) Grade-point averages (4.0 scale): Cumulative (Four-year): Graduate School (if applicable): 2) Have you applied for or received any special grants or fellowships for Graduate School? If so, please indicate the source and duration.
3) Please summarize the following: HONORS AWARDED FOR SCHOLARSHIP (scholarships, honorary society memberships, prizes, honors upon graduation, etc. and dates of receipt) RESEARCH EXPERIENCE (description, name of adviser, and dates) EMPLOYMENT AND/OR PROFESSIONAL EXPERIENCE (description and dates) PUBLICATIONS (including submitted papers) SPECIAL SKILLS (computer, specialized instruments, etc.)
## Appendix C Application Review Rubric

<table>
<thead>
<tr>
<th>CRITERION</th>
<th>Exceptional</th>
<th>Average</th>
<th>Below Average</th>
<th>Review material</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Preparation</td>
<td>Did well in courses that prepare them for this program and their research interests (defined by the four curricular groups). Consider the institution and resources that were available to the student.</td>
<td>Took and demonstrated mastery of relevant coursework. Consider the institution and resources that were available to the student.</td>
<td>Did noticeably poorly in the relevant coursework. Or missing key preparation. Consider the institution and resources that were available to the student.</td>
<td>Transcript s for specific courses and grades, CV for other academic experience</td>
<td></td>
</tr>
<tr>
<td>Research Experience</td>
<td>Has research experience and articulates the connection to motivation to pursue this degree. Is able to put their research experience into a broader context of both the field and their career trajectory.</td>
<td>Has research experience but does not illustrate a connection to the broader context of either the field or their career trajectory.</td>
<td>No research experience Consider the institution and resources that were available to the student</td>
<td>Descriptio n of research experienc e and letters of recomme ndation.</td>
<td></td>
</tr>
<tr>
<td>Motivation</td>
<td>Evidence of strong interest and curiosity in the area of research that they are interested in. Demonstrates why they want to come to our department</td>
<td>Evidence for one but not both and/or vague evidence for both.</td>
<td>Not clear why the applicant wants to pursue a degree in our department</td>
<td>Research statement, Personal statement, letters of recomme ndation, CV and/or transcripts</td>
<td></td>
</tr>
<tr>
<td>Pursuit of Excellence /</td>
<td>Describes or shows evidence</td>
<td>Limited evidence</td>
<td>None or contrary evidence</td>
<td>Research statement</td>
<td></td>
</tr>
<tr>
<td>Research Potential</td>
<td>for a willingness to question their own work/results/performance Demonstration of creativity and curiosity Demonstration of self motivation and drive (could be non-academic activity)</td>
<td></td>
<td>CV/Resume</td>
<td>and letters of recommendation</td>
<td></td>
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<tr>
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<td></td>
</tr>
<tr>
<td>Resilience and Perseverance</td>
<td>Demonstrates persistent and personal growth in the face of challenges. Evidence that student is self-driven and a self-advocate.</td>
<td>Describes a time when they failed or encountered an obstacle, but does not demonstrate personal growth.</td>
<td>No evidence given for having dealt with challenges or setbacks. Personal statement and letters of recommendation</td>
<td>Personal statement and letters of recommendation</td>
<td></td>
</tr>
<tr>
<td>Contributions to Diversity</td>
<td>Would likely make a strong contribution to the diversity of our community, should be reviewed by the faculty on the diversity committee and by the GPC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cross-Option Review</td>
<td>List additional options that should review this file</td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>
Appendix D: Applicant Interview process

The interview of the prospective graduate student (applicant) will be one of the most important factors to admitting said student to our program since we will be admitting before inviting the students to visit. Therefore we need to make the process as equitable and stress free as possible for the prospective student. We recommend that there is a consistent structure of each interview for all applicants. The interview should be conducted by at least 2 faculty members via Zoom so that the implicit bias of a single faculty member can be somewhat mitigated by addition of a colleague to ensure the interview is moving along equitably. Each applicant should be given a chance to answer the same 5-6 questions as all the other applicants. This will ensure that each applicant is judged equitably by the interviewers. However, there should be ample time to ask probing questions based on the responses to the faculty members’ questions. The faculty will provide the questions to the applicant when they are setting up the timeframe for the phone call. This will give the applicant ample time to think about the questions and have answers prepared which will make for a faster moving and less stressed interview. Faculty should read prospective students’ applications and essays in full before the interview.

These questions will also be provided to the applicants.

- Interview questions:
  - Describe how you would contribute to SoO’s commitment to increasing diversity, equity and inclusion.
  - What opportunities have you had working and collaborating in diverse, multicultural and inclusive settings?
  - What is your research interest? What are you hoping to research? If you could, would you have changed anything about your academic experience so far?
  - Reflecting on your strengths and weaknesses in a work and research setting, what type of lab environment or mentoring environment works best for you?
  - Tell us something about yourself that you were not able to express in your application. Is there something you would like us to know about you that has nothing to do with academics?
  - Do you have any questions for us?

- Post Interview
  - Faculty should follow-up by phone or email with all applicants.
  - The interview worksheet will be shared with the curricular group in each option.
Appendix E. Wait-List Letter

Dear X:

I am writing to inform you that the University of Washington School of Oceanography is not able to make a final decision on your application at this time. Due to your outstanding application and promise, the graduate admissions committee has placed your name on a wait list for placement in our program. The number of students we admit each year varies depending on the available funding for research projects. We are continuing to evaluate applications and the potential space in our graduate program and will reach out to you as soon as we can. Your name has been placed on the waitlist because a faculty member in our department was very impressed by your applications but is 1) waiting to hear about the availability of research funding, or 2) has offered a position to another student and is waiting to hear if they will accept the position. It is possible that you will be admitted to the program.

If you have applied for external fellowships and hear that you were successful, please reach out to us. If you are no longer interested in attending the University of Washington School of Oceanography or have accepted an offer elsewhere and do not want to be on the waitlist please email Michelle Townsend (mtown@uw.edu) and your potential faculty advisor in the School of Oceanography.

Thank you for your continued interest in the University of Washington School of Oceanography as we work to finalize our graduate admissions.

Best regards,

Michelle Townsend
Appendix F. ARGO Peer mentoring program

ARGO has proposed a within SOO formal peer mentoring program. ARGO suggests peer mentoring be run by fourth year students. The hand off of the peer mentoring program organization from the fourth year students to the rising four year students should occur in late April after graduate recruitment has been completed. The total cost to the department will be $1500 to $2000 per year. The structure of the organization of the program will be as follows

● Mentor groups will consist of 4 people: 2 mentees (1st-years) and 2 mentors (older grad students, year 3 and above), which will meet once a quarter (more if they want) over food/drink paid for by the department ($100 per group per quarter for one lunch or dinner). All mentees and at least one mentor must be present in order for reimbursement. Other meetings of the groups are encouraged but not required and not reimbursed. 1st-years are automatically assigned to a mentor group, while mentors are volunteers.

● Administrative responsibilities are low and are shared between the GPC and the graduate students who are in their 3rd/4th years. The timeline for implementing the peer mentoring groups is as follows
  ○ Spring quarter
    ■ (4th years) Gather names of interested mentors, provide in the email the details of the program.
    ■ (4th years) Make pairings with first years into the 4 person groups.
  ○ May/June
    ■ (4th years) Send out emails to mentoring groups showing who they got matched with. This way mentees immediately have 2 “go-to” people for questions about housing, Seattle, etc. This email will have expectations and protocols for the program outlined in it. It should also include an anonymous form that students can fill out that has suggestions to improve the program.
    ■ Mentors send a short hello/welcome/introduction email to their mentoring group.
  ○ Each quarter of academic year
    ■ (GPC) Send out emails reminding groups to meet, reminding them of their budget, and reminding them what topics their conversation should remember to cover. The GPC should send this email out when they send out the emails about remembering to register for classes. Topic suggestions/planned for 2020-2021 academic year:
      ● 1st quarter: How is your transition to grad school going? What are you nervous/excited about? Making the most of your first year. What to expect this year.
      ● 2nd quarter: Work-life balance.
      ● 3rd quarter: Advisor-advisee relationships.
    ■ Mentor groups meet over lunch or dinner (ideally near the beginning of the quarter, at least during the fall quarter!). Mentors write a brief
summary (with no personal information of any kind included) of the topics discussed, ideas for the program, and any suggestions for future topics so that we record this insight and constantly are improving our program (2-3 sentences is ok!)

○ GPC is the point of contact if anyone is wanting to/needs to be reassigned to a group. This can be done if requested with no questions asked!

○ March (4th years) remind 3rd years that they'll be in charge next time.
References:


Sealy, L., Saunders, C., Blume, J. and Chalkley, R., 2019. The GRE over the entire range of scores lacks predictive ability for PhD outcomes in the biomedical sciences. PloS one, 14(3).