Letter to UCSB EEMB Faculty with Demands Toward Racial Equity

DIRECT TO SIGNATURES

Note: This text can be reused as a template for letters to other departments, divisions, universities, etc.

To view the letter written solely by Black Graduate Students of EEMB, click HERE.

To download this document in PDF format (may be slow), click HERE.

July 1, 2020

Dear All UCSB EEMB Faculty Members:

We, the Ecology, Evolution, and Marine Biology (EEMB) graduate students of the University of California, Santa Barbara (UCSB), support the recent statements of individual faculty members and the UC Faculty Senate acknowledging that systemic anti-Black racism is prevalent in our society and academia. Yet, alone, these sentiments feel hollow. We stand with Black Graduate Students of EEMB. We agree with them that the challenges faced by Black and other underrepresented students in EEMB require systemic change. **We fully endorse the letter they recently wrote to faculty, staff, and administration, and call for you to prioritize the demands in that letter.**

As graduate students, we have already begun taking actions to alter our ways of thinking and work towards this change. However, as faculty, your priorities up until this point have not made us proud to call ourselves students of this department. We need you to internalize that your individual and collective actions (or inactions) guide social norms and student mindsets, and that the glacial pace at which you have worked collectively to dismantle deeply ingrained racism within our fields has been inexcusable. With your power to shape the future of our disciplines, we demand that, as faculty of EEMB, you move beyond performative gestures of support for diversity and commit to concrete actions within our department, some of which we outline below.

While the Black Lives Matter movement and national response against anti-Black police brutality have been a catalyst for the timing of this statement, our demands reflect a culmination of graduate student dissatisfaction with the lack of meaningful anti-racist action in the department. In response, we formed a graduate student committee for the advancement of Diversity, Equity, Inclusion, and Wellness (DEIW) in EEMB. This committee distributed a survey in November 2019, with condemning results. Of 45 graduate student respondents, 66% identified bias against underrepresented students and 83% identified lack of support for underrepresented students as problems within EEMB. Importantly, the only respondents who perceived the department as offering "good" or "fantastic" support to students from underrepresented ethnicities or cultural backgrounds were students who identified as white.

The current global momentum for reform gives us a unique opportunity to be at the forefront of change in science, technology, engineering, and mathematics (STEM), and highlights the need for concrete and immediate action at all levels. We therefore ask all faculty to not only invest in continual reassessment of departmental culture, student recruitment, and hiring practices, but to also engage in immediate actions to dismantle white supremacy.

We need mentors worth emulating—ones that elevate the voices of students of color and challenge the unconscious biases of those of us whose opportunities to study in this department stem from privilege and disproportionate access. We measure the success of our department not merely by the metrics that currently and historically have dominated STEM (many of which perpetuate disparities in opportunity), but by the extent to which the department continually seeks out, identifies, and eliminates systemic bias and inequity in the fields of ecology, evolution, and marine biology.

We demand that faculty convene a mandatory town hall with all faculty, staff, and administrators to identify and overcome the systemic barriers and discriminatory practices that perpetuate anti-Black racism. Ultimately, our demands listed will promote diversity, equity, and inclusion (DEI) for all oppressed people in our academic community.

Our demands are divided across five domains:

1. **Student Recruitment and Support Procedures**

2. **Graduate and Undergraduate Program & Curriculum Design**

3. **Hiring and Career Advancement Procedures**

4. **Culture and Capacity Building**

5. **Accountability and Evaluation**

To facilitate rapid and lasting change, we urge faculty to lead the department in undertaking these actions. As graduate students, we lack the power and tenure to ensure that these initiatives are implemented on a departmental level, though by signing this document we agree to support you in the creation and implementation of these demands.

We have prepared an overall Summary of our Demands, as well as Appendices 1–5 detailing action items within each of the five domains. For each subcategory within these domains we have included the following along with references:

I. An overview of the department's current practices

II. A detailed description of each action item we demand

III. Examples of programs that may serve as models

We have also created **Appendices 6–8** to provide a list of administrative resources, additional UCSB institutional resources, and funding opportunities for further investigation by the department. While we have focused on institutional actions, meaningful change will require a fundamental cultural and ideological shift in our department and academia. This process begins with reflecting on personal prejudices and blind spots, as well as committing to actionable change. Thus, the **final Appendix** is an introductory list of additional reading resources for personal or group reflection to complement those highlighted within each domain.

Immediate faculty discussion that includes student representation is a necessary first step by which the department can quickly begin transparent and action-oriented growth. Without a concerted effort from the faculty to begin this process, as outlined below, we will actively inform prospective students and publicize the lack of response within and beyond the university.

Within two weeks we demand:

1. All EEMB faculty, especially tenured faculty who hold higher positions of power in the department and institution, **provide a signed public response to this letter.** The letter should reference each domain, including how actions will be distributed among individual faculty members and administrators, and accountability measures for faculty who refuse to participate in this process. If consensus on a singular response is not reached within the two weeks individual faculty members or groups of faculty can prepare alternative statements.

2. **The scheduling and draft agenda for an open faculty meeting** that all students and postdoctoral scholars may attend (with some students designated to speak as representatives). Furthermore, we demand that one faculty meeting every month devote substantial time to discuss progress towards the goal of eliminating racism and promoting diversity, equity, inclusion and wellness in the department.

Within six weeks we demand:

3. A **public action plan** that details timelines to address each demand. We offer to collaborate with you on this document.

Further inaction by faculty would not only signify to us your acceptance of current systemic racism in academia and the EEMB department, but would also guarantee that inequity and exclusion will continue to harm current and future generations of scientists. Without united action by the faculty to prioritize these issues, we cannot in good faith recommend our department to prospective students, collaborators or invited speakers.

As the people who are most actively pursuing change are people who are underrepresented in our department, we understand that backlash from faculty who do not understand the severity of these issues may be more intense because of underlying racism. Therefore, individual faculty must take it upon themselves to protect these students by engaging in hard conversations with their colleagues. We ask EEMB faculty to publicly commit to these demands and ensure an environment intolerant of racism and bias and inclusive of all.

In Solidarity,

EEMB and IGPMS graduate students and other endorsers

Click to sign
Click to view signatures

Edits: The text of the first paragraph was amended 07/2/2020 12:01 AM to explicitly state that "we fully endorse the letter [Black Graduate Students of EEMB] recently wrote to faculty, staff, and administration, and call for you to prioritize the demands in that letter". Links to letter added 7/3 12:20 PM.

Summary of Demands

1. Student Recruitment and Support Procedures

1.1 Increase equity and transparency in graduate student recruitment.

1.1 A) Include graduate students and postdoctoral scholars on graduate student admission committees.

1.1 B) Cover application fees for all candidates who qualify for departmentally set criteria.

1.1 C) Establish a recruitment weekend specifically for students from underrepresented backgrounds (see definition of terms).

1.1 D) Increase internal fellowships for underrepresented graduate students.

1.1 E) Provide a departmental DEI statement and discuss active DEI resources on the EEMB recruitment web page.

1.2 Promote equitable access to professional development for undergraduates.

1.2 A) Actively recruit underrepresented UCSB undergraduate students for research/internship positions.

1.2 B) Promote graduate preparation programs for underrepresented undergraduate students.

2. Graduate and Undergraduate Program & Curriculum Design

2.1 Improve graduate and undergraduate coursework.

2.1 A) Redesign graduate and undergraduate courses within an anti-racist framework.

2.1 B) Incorporate evidence-based teaching practices into all courses.

2.1 C) Actively develop a culturally-responsive curriculum.

2.1 D) Ensure appropriate leadership for all courses (see Appendix 3.1G).

2.2 Formalize mentorship and requirements for graduate students.

2.2 A) Conduct assessments of students to determine knowledge and individual mentorship needs.

2.2 B) Ensure successful mentorship practices.

2.2 C) Help students create their career plans.

2.2 D) Provide clear department level expectations for written and oral exams.

2.2 E) Ensure students' safety in all mentorship interactions and relations.

2.3 Update department seminar series.

2.3 A) Emphasize inviting seminar series speakers from universities and departments that also respect and implement diversity and inclusion initiatives.

2.3 B) Invite significantly more speakers from historically marginalized backgrounds.

2.3 C) Include at least one seminar per quarter that directly focuses on topics affecting historically marginalized communities.

3. Hiring and Career Advancement Procedures

3.1 Reform hiring practices.

Faculty Hiring

3.1 A) Support affirmative action and commit to bold hiring targets.

3.1 B) Require and prioritize contributions to diversity statements ahead of all other statements in the application process for all faculty candidates.

3.1 C) Agree to more cluster hires of multiple faculty at a time to reduce isolation and avoid tokenizing faculty from underrepresented groups.

3.1 D) Include student representatives with voting power on hiring committees and increase transparency and feedback throughout the hiring process.

3.1 E) Appoint a faculty Vice Chair for DEI in EEMB to facilitate discussions of DEI at the departmental level, particularly during the hiring process, and ensure appropriate training.

General Hiring

3.1 F) Hire a permanent DEI advocate staff position to assist with the logistics of the demands laid out in this document, handle complaints, and coordinate DEI efforts.

3.1 G) Ensure that faculty teaching core courses for graduate students have the training and depth of knowledge to do so within an anti-racist framework.

3.1 H) Increase transparency in the existing postdoc and research staff hiring process to reduce nepotism.

3.2 Modify procedures for faculty tenure and career advancement.

3.2 A) Incorporate DEI work into advancement and promotion.

3.2 B) Establish a comment period when a faculty member is up for promotion.

4. Culture and Capacity Building

4.1 Introduce active anti-racism programming in EEMB.

4.1 A) Ensure a mandatory, yearly anti-racism training for all faculty, staff, and students.

4.1 B) Create open discussion sessions for all faculty, staff, and students.

4.1 C) Promote anti-racism events held by the Multicultural Center.

4.2. Support student retention.

4.2 A) Identify disparities for underrepresented students.

4.2 B) Ensure safe discussion spaces for Black and Indigenous People of Color (BIPOC).

4.2 C) Provide peer mentorship and mentorship "families" for incoming students.

4.2 D) Implement a funded transition program for underrepresented students.

4.2 E) Create and maintain a resource of information on funding for underrepresented students.

5. Accountability and Evaluation

5.1 Endorse evaluation by the DEIW committee.

5.1 A) Collaborate with the DEIW committee.

5.1 B) Grant the DEIW committee additional departmental responsibility.

5.2 Create internal and external forms of accountability.

5.2 A) Increase structures of internal accountability.
   i. Create and enforce a department-wide anti-racist code of conduct.
   ii. Implement departmental reporting processes for conduct violations.
   iii. Include student representation from GSAC and DEIW at all faculty meetings.
   iv. Solicit regular external reviews of EEMB's efforts towards supporting DEI.

5.2 B) Demonstrate accountability externally and to the general public.

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Introduction to Appendices 1 through 9

Abstract

Appendices 1–5 detail current departmental practices, demanded action items, programs which offer useful examples, and reference materials for each of the five aforementioned domains of action: student recruitment and access, graduate and undergraduate program and curriculum, faculty hiring and career advancement, and culture and capacity building. Appendices 6–9 contain lists of potential funding sources, administrative resources, UCSB resources, and additional readings. We have compiled this information to give faculty a place to start when considering our demands, and we hope you will use these materials to help formulate a departmental response plan. Below we describe how we have defined terms used throughout the document. Although there are variations on how these terms are used and applied more broadly, we have clarified how the terms are defined in the context of this document.

Why we used the term Demand

We borrow from equity leaders across disciplines when we use the term demand.

We use 'demand':

To *elevate* the attitudes and values associated with contemporary liberation movements in solidarity with our BIPOC colleagues, students, staff, and mentors;

To *authentically center* the historical struggle that BIPOC experience when fighting for adequate resources against a backdrop of competing interests;

To *disrupt* the (overt/covert) oppressive impacts that academic research has on marginalized communities around the world; and

To *highlight* that recognizing the humanity and experiences of our Black colleagues is not something we are willing to compromise on.

Definition of terms

Underrepresented: belonging to an identity group that has been historically and systematically excluded from higher education and other rights or opportunities, and is therefore currently less present or less visible in our department than

they would be if the demographics of our community matched those of the broader population.

Diverse: A group encompassing those who have a variety of individual and group-social identities, including but not limited to underrepresented gender identities, sexualities, ethnicities, and cultural backgrounds; socioeconomic disadvantage; Indigenous status; first-generation status; dis/ability; and neurodivergence. It is important to keep in mind intersectionality (Crenshaw, 1989), or the interconnected nature of categorizations such as those listed.

Anti-racism: "The active process of identifying and eliminating racism by changing systems, organizational structures, policies and practices and attitudes, so that power is redistributed and shared equitably." This definition highlights the importance of anti-racism as a verb, a process that requires consistent attention, internal reflection, and knowledge building.

Equity: Whereas equality indicates that everyone receives the same amount of resources, equity takes into account each person's starting point or conditions. In an equal distribution, each person might receive one piece of bread regardless of their needs; in an *equitable* distribution, one would take into account whether the person has eaten yet that day, how much food they would need to survive, and allocate an appropriate amount of bread that accounts for these initial imbalances. For example, equity is important when thinking about education and mentorship, as each student comes into the program with a different background and different needs.

Inclusion: The "active, intentional, and ongoing engagement with diversity," which allows for the creation of a space where all individuals from all groups feel comfortable, safe, respected, and heard.

Appendix 1. Student Recruitment and Support Procedures

"*[EEMB] generally likes to say that they foster 'diverse' students, but [we] have yet to see action to confirm this.*" - Grad. student #16

2019 EEMB DEIW Departmental Climate Survey

Overview

Ninety-five percent of respondents of the EEMB DEIW Department Climate Survey in November 2019 say the department lacks graduate students from underrepresented backgrounds. To increase equity in our department, we look to create systems that improve accessibility to underrepresented minority students, promote the visibility of underrepresented students and opportunities for those students, and emphasize diversity in recruitment and admission practices. Central to attaining these goals is resolving financial barriers at the undergraduate level, through supporting application to our department and providing continued support in the graduate program. Additionally, we aim to create an institutionalized support system for improving diversity in EEMB through the development of mentorship programs based on shared experience, and similar efforts toward recruitment and retention of talented underrepresented students. We have detailed these demands in two subsections: 1.1) Increase equity and transparency in graduate student recruitment, and 1.2) Equitable access to professional development for undergraduates.

1.1) Increase equity and transparency in graduate student recruitment

I. Current practices

We are currently unaware of any standard graduate student recruitment procedures within EEMB, other than the student-run graduate symposium typically held in February. Initial graduate student recruitment often occurs through direct conversations with faculty, rather than at the departmental level. We are unaware of any college or departmental mandates of DEI in the recruitment decisions of individual faculty.

A limited number of application fee waivers are presently offered by UCSB's Graduate Division. McNair scholars and members of Project 1000 or the California Alliance for Minority Participation are among those eligible. However, fee waivers are not guaranteed for international students or students with demonstrated financial need.

Funding and toolkits have been offered to all UCSB departments through the Graduate Division to increase DEI by improving outreach, recruitment, and admissions practices, which EEMB has taken advantage of. In addition, Carlos Nash (Director of the Graduate Diversity Programs) stated that all EEMB faculty have access to the Graduate Division Diversity Resource GauchoSpace site, which provides additional resources for diversity and inclusion.

II) Action items

1.1 A) Include graduate students and postdoctoral scholars on graduate student admission committees.

● Eligible students should be allowed to apply to be on these committees and complete trainings on anti-racist, fair, and unbiased admission policies. At least two graduate students or postdoctoral scholars should be included in these committees and given a "vote" so they can advocate for a more diverse student body. Initiative must be taken to ensure that all members of admissions committees are informed about holistic review of applications, utilizing pre-existing NSF funded resources and implicit bias training.

● Admission committee and all faculty advisors must be aware of common biases so they may accurately review letters of recommendation that may be biased towards certain demographics. There should be a faculty meeting to address common biases that manifest in letters of recommendations—many of which have been evaluated in resources from the STRIDE Committee.

1.1 B) Cover application fees for all candidates who qualify for departmentally set criteria.

● Application fee waivers are offered through broader UCSB initiatives (see Appendix 1.1 – current practices), yet not all students who meet the criteria are offered waived fees and the criteria exclude many who are financially burdened. The fact that the criteria are very limited and that waivers are not guaranteed even if you do meet the criteria present a significant barrier for prospective students in applying to our program. We propose that the department put aside funds to cover the application fees of all eligible students who did not receive

waivers through Grad Div, as well as set a higher income margin of eligibility, in order to decrease the financial burden associated with applying to graduate school. Fee waivers will be publicly advertised on the EEMB prospective students web page. Fees are currently $120–$140, which is a significant financial burden for students from lower-income backgrounds (disproportionally non-white students, due to our country's legacy of racism—see 1, 2) who must apply to multiple programs. Other universities have application fees of half to two-thirds this cost (Northwestern IB: $95; University of Illinois IB: $70; University of Texas, Austin EEB: $65–$90; Vanderbilt Biological Sciences: $95).

1.1 C) Establish a recruitment weekend specifically for students from underrepresented backgrounds.

● Following the example of Cornell University's Diversity Preview weekend and University of Michigan's Frontiers Master's Program in EEB, UCSB will put out a call for underrepresented candidates to apply for a recruitment weekend separate from other recruitment events. Applicants will submit a CV, cover letter, and diversity statement. A review committee composed of faculty and current graduate students will select underrepresented minority candidates who demonstrate academic excellence. UCSB will pay all costs for 10–15 candidates to attend a two-day recruitment event that includes a discussion panel with a diverse group of current students, interviews with PIs, and organized tours of EEMB facilities, lab spaces, and the UCSB campus. This weekend will be in addition to the traditional recruitment weekend held in February, and these candidates may be invited back for the traditional recruitment weekend to participate in those weekend's activities (like the Graduate Student Symposium). Furthermore, attendees of this weekend will have all application fees waived to decrease the financial burden associated with application. We view the proposed weekend recruitment event as a powerful tool to allow labs and faculty to evaluate potential candidates who may not have had visibility in traditional application channels (e.g., faculty networks or blind emails to faculty).

1.1 D) Increase internal fellowship support for underrepresented graduate students.

● To our knowledge, EEMB does not designate funds to actively recruit underrepresented graduate students, and relies on central campus funding or extramural funding for incoming graduate students. While the Graduate Division provides access to centralized funding (e.g., Block Grant or Chancellor's awards), only the Merit Diversity Fellowship is focused on diversity. This past recruitment year, no EEMB students were awarded the Merit Diversity Fellowship. With limited campus fellowships, incoming graduate students are expected to apply for extramural funding; yet, there are limited resources to assist them in doing so on the EEMB departmental website. In addition to general funding packages, a lack of secure summer funding is an enormous burden to students of this department. Therefore, the department should provide summer stipends in the recruitment package for students from underrepresented backgrounds.

1.1 E) Provide a departmental DEI statement and discuss active DEI resources on the EEMB website (see Appendix 5.2B).

III) Examples

Successful programs at other universities targeted at recruiting and supporting underrepresented minority graduate students:

● Cornell University's Diversity Preview Weekend reaches out to students who have historically been ignored in the Ecology and Evolutionary Biology field in

hopes of making their scientific community better reflect our society.

- The [University of Michigan's Frontiers Master's Program in EEB](#) is a fully-funded Master's program, intended to provide broad training and support for students from underrepresented groups in Ecology and Evolutionary Biology who ultimately plan to pursue a PhD.

- Harvard T.H. Chan School of Public Health provides an [Annual Conference](#) to increase diversity in Mathematical Modeling & Public Health.

- UC Merced clearly states their dedication to [Diversity and Inclusion](#) as well as available fellowships and mentorship training programs.

Other organizations dedicated to increasing diversity in STEM that faculty should share with students are as follows:

- The [Institute for Broadening Participation](#) provides diversity and mentoring resources for educators along with funding and professional development resources for students.

- [Black Girls Code](#) is an organization dedicated to teaching young, female students of color (ages 7–17) programming and technology skills to help prepare them for entering the workforce.

- The [SEEDS](#) program (Strategies for Ecology Education, Diversity and Sustainability) within the Ecological Society of America provides hands-on ecological experiences to a wide range of young students from a diverse range of backgrounds to promote the various applications of ecology.

- The [EcologyPlus](#) website provides career, funding, and networking resources to underrepresented early-career scientists.

- The [National Association of Black Geoscientists](#) provides mentorship, funding, career, and networking resources for Black students pursuing degrees in Geosciences.

- The [National Organization for the Professional Advancement of Black Chemists and Chemical Engineers](#) (NOBCChE) is an organization dedicated to providing career development resources and mentorship to Black students and professionals in chemistry-related fields.

- [Entry Point!](#) by AAAS is a program that identifies talented students with apparent and non-apparent disabilities and refers them to summer internships in STEM fields.

- [NoGLSTP](#): National Organization of Gay and Lesbian Scientists and Technical Professionals empowers members of the LGBTQ+ community in STEM fields by providing community support as well as educational, professional, and networking resources. NoGLSTP also provides education about issues concerning the LGBTQ+ to members of all communities.

- [Out in Science, Technology, Engineering, and Mathematics](#) (oSTEM) is an organization that empowers members of the LGBTQ+ community in STEM by providing community support, professional development, mental health, and academic resources.

1.2) Promote equitable access to professional development for undergraduates

I. Current practices

EEMB faculty and graduate students engage with undergraduates via courses, mentorship, and research/internship positions. To our knowledge, there are no

department-level requirements for promoting DEI among the undergraduates who work within EEMB laboratories. Recently Drs. Hofmann, McCauley, and Young received a 5-year NSF award to support Latinx undergraduate education and we're excited by the opportunity this award provides to implement the action items outlined below.

II. Action items

1.2 A) Actively recruit underrepresented UCSB undergraduate students for research/internship positions.

● Undergraduate research opportunities are key in fostering interest within a discipline, retention within a major, and competitiveness in applying to graduate school. EEMB has a history of hiring former EEMB undergraduate researchers as technicians and admitting them as graduate students. Instead of limiting the recruitment of undergraduate researchers to the students familiar with and interested in Ecology, Evolution, and Marine Biology, faculty (and graduate students) should be required to actively search for Black and other underrepresented minority students by reaching out to general and discipline specific underrepresented minority student groups.

● *Financial support for undergraduate researchers:* Academia relies on significant amounts of unpaid labor, especially from undergraduate "volunteers" who may have been told that dedicating time to building a relationship with a research lab is essential to their career advancement. This construct disadvantages students who do not have the existing financial support to spend their time taking on many hours of unpaid labor (Pierszalowski, Vue, & Bouwma-Gearhart, 2018), and has been demonstrated to disproportionately exclude first-generation students and groups historically underrepresented in STEM fields (Bangera & Brownell, 2014). To successfully recruit undergraduate research assistants from underrepresented backgrounds, all PIs and graduate students seeking to recruit research assistance must offer paid opportunities, at rates competitive with other on-campus jobs, ideally targeting these offers towards students for whom it would otherwise not be feasible to gain research experience.

● In addition to such lab-funded positions, EEMB must commit to institutionalization of a departmental fund devoted to supporting undergraduate research salary support. The department as a whole should plan on submitting a proposal for such a fund by 2021 describing: planning for and implementing this departmental fund; strategies for disbursement to lab groups; commitment to a prioritization of these funds to support the salaries of undergraduate researchers currently underrepresented in ecology; and strategies for sustained maintenance. The establishment of such an institutionalized fund within EEMB will reduce yearly variability in available support for undergraduate research salaries by diminishing the link between undergraduate positions and ephemeral state or federal funding sources (e.g., NSF grants out of individual labs; Pierszalowski, Vue, & Bouwma-Gearhart, 2018). Such a sustained fund would therefore guarantee a minimum number of salaried undergraduate research positions in EEMB per year, on top of those funded by lab-specific grants.

1.2 B) Promote graduate school preparation programs for underrepresented undergraduate students.

● Graduate preparation programs for undergraduates, such as the examples mentioned below, are another source of opportunity for advancing a diverse graduate population. Faculty should provide information regarding these opportunities to undergraduate students within the department and make course announcements, particularly in the lower division courses such as

Introductory Biology, to reach a broad audience. Faculty members must take responsibility for actively promoting these resources and opportunities, rather than passing the burden of finding programs to students who have unequal access or ability to do so based on their family or community's experience level in academia. Lists of these programs should be hosted on the EEMB website, disseminated in course announcements, and promoted through SACNAS, the Black Students Union, and other groups supporting underrepresented undergraduate students.

● The department will commit *at least* one section of each Introductory Biology course to discuss professional development for undergraduates at the beginning of the quarter. This should include the following: 1) panel discussion from a diverse group of upper division EEMB majors followed by a 2) faculty-lead discussion on opportunities to develop research and leadership experience within the department. Instructors and panelists should inform students on how to get involved in research and other opportunities on campus.

● In an effort to make research opportunities more accessible to students from marginalized communities, the department will make a commitment to transform all EEMB laboratory courses to be Course-Based Undergraduate Research Experiences (CUREs). Courses with CURE models make research more inclusive as they increase the awareness of opportunities and provide a chance for *all* students to engage in research, regardless of external course or summertime commitments (Bangera & Brownell, 2014).

● We propose that EEMB host a 'diversity in STEM' conference in late spring each year. Following the example of the Harvard School of Public Health, this conference will take the form of a small symposium with the following goals: 1. Showcase research from Black and other underrepresented EEMB students; 2. Provide information on program applications and the graduate school application process; 3. Discuss potential careers in EEMB-related fields (both academic and otherwise). This conference should be open to a group that has at least completed their junior year of undergraduate studies but no more than 1 year of a master's program, and attendees should be a diverse group of UCSB students, emphasizing underrepresented groups. Attendees will apply through the submission of a personal statement detailing how the conference will help them in their career path and personal development, as well as a diversity statement indicating their identities and personal commitment to diversity. Up to 50 applicants will be selected based on their personal statement, background/identity, and personal commitment to diversity. Furthermore, attendees of this conference, should they choose to apply to EEMB in the future, will have their application fees waived.

III. Examples

● Current programs that are dedicated to preparing undergraduates for graduate careers include the California Alliance for Minority Participation, Educational Opportunity Program, the McNair Scholars Program, MARC, and UC LEADS. Programs that are specifically tailored to conservation and ecology and supported by the Doris Duke Conservation Scholars Program can be found here. These programs exist to support excellent students whose situations and conditions may have placed them at a disadvantage in progressing in their particular field. Within the UC system, the NRS Field Fellowship is available to support summer research projects at UC Reserves for students underrepresented in the environmental sciences.

● The Biology Department at CSU Sacramento has successfully transformed all of its biology labs into CUREs through the SIRIUS program (Sustainable Interdisciplinary Research to Inspire Undergraduate Success), which provides undergraduates with experience applying their research directly to the American River ecosystem.

References

ADVANCE Program - University of Michigan. "STRIDE Readings." *UM Advance Program*, advance.umich.edu/stride-readings/. Accessed 29 June 2020.

Bangera, G., & Brownell, S. E. (2014). Course-based undergraduate research experiences can make scientific research more inclusive. *CBE Life Sciences Education*, *13*(4), 602–606. https://doi.org/10.1187/cbe.14-06-0099

CUDPW. "Cornell University Diversity Preview Weekend." *Cornell University Diversity Preview Weekend*, 2018, www.cornelldpw.org/. Accessed 29 June 2020.

Hannah-Jones, Nikole. "From the Magazine: 'It Is Time for Reparations.'" *The New York Times*, 24 June 2020, www.nytimes.com/interactive/2020/06/24/magazine/reparations-slavery.html.

Kuhn, Moritz, et al. "Income and Wealth Inequality in America, 1949–2016." *Journal of Political Economy*, 14 June 2018, 10.21034/iwp.9. Accessed 15 Apr. 2019.

Pierszalowski, S., Vue, R., & Bouwma-Gearhart, J. (2018). Overcoming Barriers in Access to High Quality Education after Matriculation: Promoting Strategies and Tactics for Engagement of Underrepresented Groups in Undergraduate Research via Institutional Diversity Action Plans. *Journal of STEM Education: Innovations and Research*, *19*(1), 48–55.

"UCSB Resources and Listservs". Compiled by Rice, M. and Lowman, H. 2020.

University of California Los Angeles. "Faculty Search Committee Resources." *UCLA Equity, Diversity & Inclusion*, 2020, equity.ucla.edu/programs-resources/faculty-search-process/faculty-search-committee-resources/. Accessed 29 June 2020.

University of Michigan. "Frontiers Program." *U-M LSA Ecology and Evolutionary Biology (EEB)*, 2020, lsa.umich.edu/eeb/graduates/prospective-students/program-overviews/frontiers-program.html. Accessed 29 June 2020.

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Appendix 2. Graduate and Undergraduate Program & Curriculum Design

"It is very unlikely to see one of our invited speakers be from an underrepresented background…we are painting this picture to our students that 'successful' researchers look a certain way." - Graduate student #21

"I don't feel there is a difference in the support those of a minority background are receiving, and there should be." - Graduate student #19

2019 EEMB DEIW Departmental Climate Survey

Overview

The curriculum of our department should be reshaped to actively include information on the historical contexts of white supremacy and racial disparities in STEM, as well as implement best practices for developing anti-racist pedagogy. These topics should be essential themes of both graduate and undergraduate coursework.

Both graduate and undergraduate coursework should be expanded to include historical literacy on the role of racism in science and how to incorporate anti-racist practice into research programs. Intentional redesign of courses to align with best teaching practices, along with explicit criteria and improved mentorship in the graduate program, can help to address the retention gap for disadvantaged minority students at all levels. Invited seminar speakers must exemplify these goals, with an emphasis on inviting speakers who come from historically marginalized backgrounds and from universities and departments whose diversity and inclusion initiatives mirror our own.

In Appendix 2 we propose the following three areas of action to ensure that our curriculum covers these important topics and enables all students to participate fully and succeed in the program regardless of their background: 2.1) Graduate and undergraduate coursework, 2.2) Mentorship and requirements for graduate students, and 2.3) Department seminars.

2.1 Improve graduate and undergraduate coursework

I. Current practices

EEMB's graduate program currently has 90 students enrolled in Masters and PhD tracks. There are currently three required quarter-long courses for all graduate students: EEMB 502 ('Teaching Techniques'), and EEMB 508/509, a two-quarter introductory series that covers a wide range of topics and varies greatly year to year. As far as we know, the most recent external review of our department highlighted the need for change to this core curriculum. Graduate students also have the option to sign up for additional seminar courses on special topics as their schedules allow. The offerings of these courses vary from year to year based on faculty and student interest. However, there is no requirement to enroll in courses beyond the required three seminars.

Undergraduate students interested in EEMB enter UCSB as pre-bio majors. After completing their preparatory coursework in general biology, physics, chemistry, and math, they can petition to declare one of the EEMB majors: Aquatic Biology, Biological Sciences, Ecology and Evolution, Physiology, or Zoology. They then have access to upper division courses in their area of specialization.

The undergraduate and graduate course catalogs do not contain any classes specifically addressing diversity, equity, inclusion, or anti-racism—although "Special Topics" courses such as EEMB 92/192/292 may offer sufficient flexibility to run this type of curriculum. While there can be significant institutional barriers to changing the undergraduate program of study, EEMB is currently in a position to add courses and reassess some of its core curriculum. In Spring 2020, EEMB professors were awarded an NSF FUERTE grant in support of UCSB as a Hispanic Serving Institution. It includes $2.04 million in funding over 5 years to improve retention of underrepresented students, particularly Latinx students, in EEMB. This is a crucial opportunity to re-evaluate existing structures and develop new curriculum and resources for undergraduate students. We anticipate that work funded by this grant can be leveraged to improve retention and learning outcomes for all underrepresented students in EEMB.

II. Action items

2.1 A) Redesign graduate and undergraduate courses within an anti-racist framework.

● All graduate and undergraduate lectures and syllabi must include meaningful contributions from a diverse range of authors, particularly BIPOC authors whose voices have historically not been amplified in our fields (Schinske, Perkins, Snyder, & Wyer, 2016).

    i. The causes and effects of disparities in citations should be explicitly discussed.

    ii. The representation of scientists from all backgrounds should be explicit in the curriculum (i.e., pairing science readings with the scientist's story, including images of the authors in lecture slides, linking authors' web pages to readings).

● Develop a required core course to address anti-racism in STEM for graduate students as part of the department's ongoing effort to redesign our core graduate curriculum.

    iii. A full seminar course should be devoted to deepening graduate students' understanding of historic and current racism in STEM and in academia more broadly.

    iv. This course should include training on how to be actively anti-racist in our professional roles as scientists.

    v. Training in this course should serve to deepen and expand on—not replace—a required anti-racism training for all students, faculty, and staff (see Appendix 4.1).

● Incorporate awareness of systemic racism and exclusion, as well as anti-racism training, into the undergraduate curriculum through course modification, course addition, and updated major requirements.

    vi. Reinstitute what UCSB calls an "Ethnicity" GE course requirement for EEB and Aquatic Biology undergraduate majors through a multipart course sequence similar to the Dimensions of Culture series required at UCSD. This is essential in developing foundational knowledge to think about and effectively discuss systemic racism in science and society.

    vii. Introductory undergraduate courses need to be built with a growth mindset (Yeager et al. 2019) to ensure that students from all backgrounds have an equitable opportunity at succeeding in the course.

● Throughout our required graduate and undergraduate curriculum, all courses should include conversations on systemic barriers to the advancement of Black people and other groups in academia, and the fact that diverse groups of scientists produce better science (Swartz, Palermo, Masur, & Aberg, 2019). Professors should actively invite course-specific discussions on what can be done to dismantle these barriers. For example, Teaching Techniques (EEMB 502) should dedicate time toward education about the impact of racism and white supremacy in the classroom. Graduate students should learn teaching strategies that promote cultural competence (Torino, 2015, other references in 2.1 B).

2.1 B) Incorporate evidence-based teaching practices into all courses.

● A moderate increase in course structure (Eddy & Hogan, 2014) and emphasis on active learning (Graham, Frederick, Byars-Winston, Hunter, & Handelsman, 2013) benefits all students and increases retention within STEM, but works disproportionately well for Black students. It has been shown to cut the white-Black achievement gap in half while also closing the first-generation achievement gap with continuing-generation students within biology at UCSB (Wilton et al. 2019). Incorporating more structure creates a more equitable learning environment, hence creating space for historically silenced voices in biology to be heard.

2.1 C) Actively develop a culturally-responsive curriculum.

● Reduce stereotype threat for underrepresented groups.

  i. Faculty should include values affirmation (self-reflection on an individual's values and how it relates to their goals) assignments to reduce stereotype threat for underrepresented groups and reduce the achievement gap of Black students and women before assessments (Cohen, Garcia, Apfel, & Master, 2006; Miyake et al. 2010).

  ii. Faculty and TAs should assess the non-content language (Seidel, Reggi, Schinske, Burrus, & Tanner, 2015) they use in class to evaluate the type of learning environment (Harrison et al. 2019) they are creating (as positive learning environments reduce stereotype threat among underrepresented groups), particularly with the goal of eliminating microaggressions in class (Harrison & Tanner, 2018). Instructors can use on-campus resources to record their classes and work to eliminate macro- and micro-aggressions from their vernacular.

  iii. The EEMB department should seek out and participate in on-campus initiatives and pilot programs to ensure success for underrepresented students. Current programs include ECoach and Eli Review which aid in building habits of studying (ECoach) and metacognition through writing and peer-review (Eli-Review).

● Consistent with anti-racist pedagogy (Blakeney, 2005), instructors must acknowledge and address the ways in which racism and white supremacy manifest in their classrooms and course materials. There is a temptation in scientific fields to assume that we are entirely separate from 'political', or human topics, but this is a fallacy that undermines both robust scientific endeavors and fair and equitable research environments. For example, discussions of eco-racism and of how climate impacts disproportionately harm poor communities and communities of color are essential to discussions of climate change. Similarly, it is irresponsible not to teach about the role of science in perpetuating myths about Black inferiority (see Jamilah Pitts' article in Teaching Tolerance).

2.1 D) Ensure appropriate leadership for all courses (see Appendix 3.1G).

● All graduate and undergraduate courses concerning issues of racism must be facilitated by faculty with appropriate background and training to avoid causing additional harm. This may involve increasing training for existing faculty, co-teaching with partners from outside the department, or hiring new faculty to help meet this essential need.

● We *strongly* suggest that the department make funds available to hire a professional consultant with expertise in anti-racist and equitable curriculum development. This consultant will help establish the suggested new courses and curriculum blocks, and review changes to existing courses. Such a (or an additional) consultant may also be hired to design a training curriculum, to be required for any appointed Vice Chair of DEI (see Appendix 3.1E) before the chair may take on facilitation and oversight of departmental efforts in reforming recruitment, curriculum design, anti-racism training, etc.

III. Examples

● Reviewing syllabi for equity-minded practice:

  This thorough guide assembled by Cuesta College is composed of six parts that provide the conceptual knowledge and practical know-how to conduct equity-minded self-reflection of the syllabus. Throughout the guide there are examples that illustrate the ideas motivating syllabus review, as well as opportunities to practice inquiry and to reflect on how

to change your syllabi and teaching to be more equity-minded. It is also important to consider how grading practices may affect student outcomes, and what the purpose of grades is for each course. A focus on standards-based grading (grading students on their mastery of course content rather than their compliance with rules regarding course structure) has been suggested to improve grade equity across demographic groups (Feldman, 2018), although little evidence exists either way to support this idea.

- Evidence-based teaching practices:

  DART is a sound analysis tool used by faculty to evaluate the inclusion of evidence-based teaching strategies in their courses (Owens et al. 2017) and reflect on ways to appropriately adjust their teaching to provide more structure for students to be heard and engage in course content.

- Evaluating the incorporation of culturally-responsive curriculum:

  The majority of scientists discussed in biology classrooms project a culture of white supremacy, which decreases marginalized students' self-efficacy, science identity, and strengthens stereotype threat. The inclusion of curricula, such as Scientist Spotlights and paper readings from non-dominant culture researchers, highlight the invaluable contributions of scientists from diverse groups, which increases student awareness of the importance of diversity in science, their ability to relate to science, and student performance (Schinkse et al. 2017).

- Collaboration between institutions:

  SEISMIC, at The University of Michigan, is a collaboration of multiple institutions to understand and reduce inequities in introductory STEM courses. One model that has been successful in MCDB at UCSB is the emphasis on having a diverse group of Learning Assistants—upper division biology student leaders—in combination with more structured Introductory Biology lectures (Wilton et al. 2019). The department can collaborate with MCDB to model a similar course within EEMB to increase student retention, performance, and sense of belonging for Black students and underrepresented students in general.

There are several other organizations that are working on modeling best curriculum practices that EEMB can learn from while implementing our own course modifications. Some of these resources include tools to evaluate and disassemble micro- and macro-aggressions, white supremacy, white fragility and more.

- The College of Earth, Ocean and Atmospheric Science at Oregon State University created an 'unpacking diversity' series that could be looked into as an example of cultivating and sustaining an anti-racist culture in the department.

- Wheaton College assembled 'How to be an Anti-Racist Educator', an outline for the design and creation of anti-racist learning environments.

- University of Connecticut has also assembled resources for both educators and students to design anti-racist curriculum.

- The University of Washington's School of Public Health developed an anti-racism competency for their program and have published steps towards developing and testing the competency (Hagopian et al. 2018).

2.2 Formalize mentorship and requirements for graduate students

I. Current Practices

The departmental requirements for graduate degrees in EEMB are outlined in the Graduate Student Handbook for MA and Ph.D. degrees. Briefly, the Ph.D. graduate curriculum requires listed coursework (EECore graduate curriculum: EEMB 508 and 509, TA series: EEMB 500, 502, and seminar series: EEMB 290), two written exams, an oral exam, a final examination defense, and two quarters serving as a teaching assistant, with slight variations in requirements for the MA degrees. PhD students must form committees during their first year and complete their written exams within 2 years after enrollment. The written exam requirements are vaguely described, with ultimate oversight by each student's committee. By the end of their third year of enrollment, the student is expected to complete their oral examination, after which the student has "Advanced to Candidacy." The student then submits a written dissertation and completes their final exam in the form of a dissertation defense (or public seminar of dissertation research following a petition) within the normative time for degree completion in EEMB (6 years). Progress is reported annually by the student and their committee in a collaborative "Progress Report and Study Plan." If progress is insufficient according to the EEMB handbook or the student's committee members, the committee may work with the Graduate Division for more formal actions.

The graduate requirements in EEMB are more flexible than most ecology and evolutionary programs, making our program unusually suited for self-guided students who can opportunistically advance their research. Conversely, the success of a student is more dependent on self motivation and mentor guidance than on program requirements and checkpoints. This approach creates space for great success, but also failure, depending heavily on mentorship. Faculty who serve as mentors to graduate students have varying levels of experience and styles when advising. In addition, students come in with similar scientific inclinations and abilities, but different access to previous research opportunities. Our program does not necessarily acknowledge this in its current approach.

Improving mentorship and re-examining communication about and expectations of key checkpoints (such as exams) of the graduate school experience can ensure the department defines and approaches *success* in an equitable manner. There are ways in which increasing structure and active learning can be built into STEM classrooms with clear results for reducing the [achievement gap](#) among students from underrepresented backgrounds. Tested approaches from classrooms may work for ensuring success for all graduate students and especially for graduate students from underrepresented backgrounds.

II. Action Items

2.2 A) Conduct assessments of students to determine knowledge and individual mentorship needs.

> ● Provide assessment pedagogy training to faculty mentors and have faculty mentors conduct formative assessments for students to determine their current level of knowledge so that mentorship can be tailored to individual student experiences.

2.2 B) Ensure successful mentorship practices.

> ● Provide faculty with training in effective mentorship practices, including the importance of "[showing up healed](#)" and providing mentorship that is geared at student outcomes rather than mentor validation.

2.2 C) Help students create their career plans.

● Require faculty mentors to explicitly address students' desired career outcomes from graduate school, including having students fill out and revisit yearly an Individual Development Plan (IDP or ImaginePhD).

● Ensure access to helpful supplemental career programs for senior students (UCSB NSF AGEP HSI Alliance is a great model for preparing senior graduate students for teaching careers).

2.2 D) Provide clear department level expectations for written and oral exams.

● This includes providing a rubric for students prior to written and oral exams so that students know the content and level at which they will be tested. These rubrics will also include expected timing, scope, and depth of knowledge and must be followed by all exam administrators.

● Include all of these criteria for success in the student handbook so that incoming and prospective graduate students know their department's expectations as they progress through the program.

2.2 E) Ensure students' safety in all mentorship interactions and relations.

● Explicitly state a department-supported review process for conflict between faculty mentors and students in the graduate student handbook so that students feel supported by the department to address concerns and make changes to hostile mentorship interactions (see Appendix 5.2A).

2.3) Update department seminar series

I. Current practices

Each lab is encouraged to nominate one or two speakers to present their research each year. The seminar coordinators (currently Hillary Young and Doug McCauley) are responsible for creating a final schedule from these requests. Seminar speakers are reimbursed for their travel to UCSB and their expenses (food, hotel, transportation) while in Santa Barbara.

II. Action items

2.3 A) Emphasize inviting seminar series speakers that are from universities and departments that also respect and implement diversity and inclusion initiatives**.**

2.3 B) Invite significantly more seminar series speakers from historically marginalized backgrounds.

2.3 C) Include at least one seminar per quarter that directly focuses on topics affecting historically marginalized communities.

III. Examples

A Beginner's Guide to Hosting a Diversity Seminar Series lays out specifics for how to plan a more inclusive seminar program. Funding sources to support DEI initiatives such as more diverse seminars can be found at Informal Science. See Appendix 6 for more funding opportunities.

References

Blakeney, A. M. (2005). Antiracist pedagogy: Definition, Theory, and Professional Development. *Journal of Curriculum and Pedagogy*, *2*(1), 119–132. https://doi.org/10.1080/15505170.2005.10411532

CAISE. "Finding Funding." *Informal Science*, 2020, www.informalscience.org/projects/funding. Accessed 29 June 2020.

Cohen, G. L., Garcia, J., Apfel, N., & Master, A. (2006). Reducing the racial achievement gap: A social-psychological intervention. *Science*, *313*(5791), 1307–1310. https://doi.org/10.1126/science.1128317

Constantin, S. "Values Affirmation Is Powerful." *Otium*, 4 May 2015, srconstantin.wordpress.com/2015/05/04/values-affirmation-is-powerful/. Accessed 29 June 2020.

Eagan, K., & Romo, E. (2017). Curricular Reform as Institutional Transformation: Infusing Active Learning into Introductory Life Science Courses. University of California, Los Angeles: Higher Education Research Institute. Retrieved from https://www.heri.ucla.edu/nih/downloads/2017-STEM-Institute-Curricular-Reform-as-Institutional-Transformation.pdf

Eddy, S. L., & Hogan, K. A. (2014). Getting under the hood: How and for whom does increasing course structure work? *CBE Life Sciences Education*, *13*(3), 453–468. https://doi.org/10.1187/cbe.14-03-0050

Figueroa, T., & Hurtado, S. (2013). Underrepresented Racial and/or Ethnic Minority (URM) Graduate Students in STEM Disciplines: A Critical Approach to Understanding Graduate School Experiences and Obstacles to Degree Progression. *Association for the Study of Higher Education*.

Foothill College SFSU. "The Scientist Spotlights Initiative | San Francisco." *Scientist Spotlights Initiative*, 2020, scientistspotlights.org/. Accessed 29 June 2020.

Fuhrmann, C.N., et al. "MyIDP." *Science Careers*, 2019, myidp.sciencecareers.org/. Accessed 29 June 2020.

Grabill, Jeff, et al. *Whitepaper: Eli Review*. Aug. 2012. https://elireview.com

Graduate Career Consortium. "ImaginePhD." *ImaginePhD*, 2019, www.imaginephd.com/. Accessed 20 Nov. 2019.

Graham, M. J., Frederick, J., Byars-Winston, A., Hunter, A.-B., & Handelsman, J. (2013). Increasing Persistence of College Students in STEM. *Science*, *341*(6153), 1455–1456. https://doi.org/10.1126/science.1240487

Haak, D. C., et al. "Increased Structure and Active Learning Reduce the Achievement Gap in Introductory Biology." *Science*, vol. 332, no. 6034, 2 June 2011, pp. 1213–1216, 10.1126/science.1204820.

Hagopian, A., West, K. M., Ornelas, I. J., Hart, A. N., Hagedorn, J., & Spigner, C. (2018). Adopting an anti-racism public health curriculum competency: The university of washington experience. *Public Health Reports*, *133*(4), 507–513. https://doi.org/10.1177/0033354918774791

Harrison, C. D., Nguyen, T. A., Seidel, S. B., Escobedo, A. M., Hartman, C., Lam, K., … Tanner, K. D. (2019). Investigating instructor talk in novel contexts: Widespread use, unexpected categories, and an emergent sampling strategy. *CBE Life Sciences Education*, *18*(3), 1–23. https://doi.org/10.1187/cbe.18-10–0215

Harrison, C. D., & Tanner, K. D. (2018). Language Matters: Considering Microaggressions in Science. *CBE Life Sciences Education*, *17*(1), 1–8. https://doi.org/10.1187/cbe.18-01-0011

Hurtado, S., & Cobian, K. (2017). Institutional Transformation: A New Framework Informed by Strategies Utilized at Highly Productive Institutions. University of California, Los Angeles: Higher Education Research Institute.

Lemieux, Mackenzie. "A Beginner's Guide to Hosting a Diversity Seminar Series." *SISTER*, 19 June 2019, sisterstem.org/2019/06/19/hosting-a-diversity-seminar-series/. Accessed 29 June 2020.

Miyake, A., Kost-Smith, L. E., Finkelstein, N. D., Pollock, S. J., Cohen, G. L., & Ito, T. A. (2010). Reducing the Gender Achievement Gap in College Science: A Classroom Study of Values Affirmation. *Science*, *330*(November).

Montgomery, Beronda L. *Effective Mentors Show up Healed*. 5 Dec. 2019,
    www.berondamontgomery.com/mentoring/effective-mentors-show-up-healed/.
    Accessed 29 June 2020.

Owens, M. T., Seidel, S. B., Wong, M., Bejines, T. E., Lietz, S., Perez, J. R., … Tanner,
    K. D. (2017). Classroom sound can be used to classify teaching practices in
    college science courses. *Proceedings of the National Academy of Sciences of the
    United States of America*, *114*(12), 3085–3090.
    https://doi.org/10.1073/pnas.1618693114

Pitts, Jamilah. "Don't Say Nothing." *Teaching Tolerance*, 3 Aug. 2016,
    www.tolerance.org/magazine/fall-2016/dont-say-nothing.

Schinske, J. N., Perkins, H., Snyder, A., & Wyer, M. (2016). Scientist spotlight
    homework assignments shift students' stereotypes of scientists and enhance
    science identity in a diverse introductory science class. *CBE Life Sciences
    Education*, *15*(3), 1–18. https://doi.org/10.1187/cbe.16-01-0002

Schinske, J.N, and Tanner, K. (2014). Teaching more by grading less (or differently).
    CBE Life Sciences Education, 13(2), 159–166.
    https://dx.doi.org/10.1187/cbe.CBE-14-03-0054

Seidel, S. B., Reggi, A. L., Schinske, J. N., Burrus, L. W., & Tanner, K. D. (2015).
    Beyond the biology: A systematic investigation of noncontent instructor talk in an
    introductory biology course. *CBE Life Sciences Education*, *14*(4), 1–14.
    https://doi.org/10.1187/cbe.15-03-0049

Southern Policy Law Center. "Teaching Tolerance | Diversity, Equity And Justice."
    Teaching Tolerance, 2018, www.tolerance.org.

Swartz, T. H., Palermo, A. G. S., Masur, S. K., & Aberg, J. A. (2019). The Science and
    Value of Diversity: Closing the Gaps in Our Understanding of Inclusion and
    Diversity. *Journal of Infectious Diseases*, *220*(Suppl 2), S33–S41.
    https://doi.org/10.1093/infdis/jiz174

Torino, G. C. (2015). Examining Biases and White Privilege: Classroom Teaching
    Strategies That Promote Cultural Competence. *Women and Therapy*, *38*(3–4),
    295–307. https://doi.org/10.1080/02703149.2015.1059213

University of California Merced. "Meet the Institutions." *NSF AGEP California HSI
    Alliance*, 2020, hsi-agep.ucmerced.edu/about/institutions. Accessed 29 June
    2020.

University of California San Diego. "General Education Requirements." *Thurgood
    Marshall College*, 2020,
marshall.ucsd.edu/academics/general-education-requirements.html#Dimensions-of-
    Culture-(3-course. Accessed 29 June 2020.

University of California Santa Barbara. "GE Special Subject Area: Ethnicity." *Program
    Learning Outcomes*,
    my.sa.ucsb.edu/catalog/Current/Documents/PLO/UGrad/GE/GE_SSA_Ethnicity.pdf.

University of Michigan. "ECoach." *Expertecoach.Com*, 2015,
    expertecoach.com/Welcome/. Accessed 29 June 2020.

Wilton, M., Gonzalez-Niño, E., McPartlan, P., Terner, Z., Christoffersen, R. E., &
    Rothman, J. H. (2019). Improving academic performance, belonging, and retention
    through increasing structure of an introductory biology course. *CBE Life Sciences
    Education*, *18*(4). https://doi.org/10.1187/cbe.18-08-0155

Yeager, D. S., Hanselman, P., Walton, G. M., Murray, J. S., Crosnoe, R., Muller, C., …
    Dweck, C. S. (2019). A national experiment reveals where a growth mindset
    improves achievement. *Nature*, *573*(7774), 364–369.

Appendix 3. Hiring and Career Advancement Procedures

> *"I see EEMB talking the talk but not walking the walk with faculty diversity—sure, we bring in potential faculty members coming from diverse backgrounds but those are not the ones who are ultimately hired."* - Graduate student #30
>
> 2019 EEMB DEIW Departmental Climate Survey

Overview

The EEMB department has a responsibility to improve the rigor and transparency of its DEI standards in hiring and career advancement. Students in our program overwhelmingly agree (93% of 41 students polled in the 2019 DEIW Departmental Climate Survey) *that there is a lack of faculty and/or invited speakers from underrepresented groups*, which has notable effects on underrepresented students' sense of belonging and community. Our institution is lagging in implementing basic standards in DEI in our hiring process. For example, a required diversity statement on candidate applications is commonplace in most academic institutions but is lacking at ours. Here we seek changes to the hiring framework that would help to standardize the recognition of successful recruitment efforts in garnering interest from underrepresented applicants and identifying biases in the hiring process. Additionally, applications should be reviewed in light of prior access, mentoring, and advocacy work, as well as academic achievements. We also argue for improved transparency and publicity from past and future hiring calls from the post-doctoral to tenure-track levels. In the advancement of faculty, we encourage steps to incorporate the recognition of informal emotional work on the part of underrepresented faculty and a period of feedback in which students, post-docs, and staff may register concerns with protection from retaliation. We detail these demands within the following subsections: 3.1) Reform hiring practices, and 3.2) Modify procedures for faculty tenure and career advancement.

3.1) Reform hiring practices

I. Current Practices

Currently, DEI is not a regular topic of discussion at the department level. For the most recent tenure track faculty job search, the [Freshwater Ecology Position](#), contributions to diversity statements were optional, though strongly encouraged. UCSB is one of only two UCs that does not require diversity statements.

No summary statistics about the hiring pool are publicly available. It is unclear whether the search committee itself conducts these analyses to ensure a thorough recruitment effort before proceeding with evaluations.

A graduate student is appointed to be the graduate representative on search committees. The graduate student body at large does not see any application materials prior to candidates being invited and accepting to interview. The graduate student body is encouraged to attend all candidate lectures and can sign up to have lunch with the candidates. A survey is conducted to take graduate student input. According to past graduate student reps, the representative is present for discussions and decisions and can voice the opinions of the student body; however, the vote of the graduate student representative is only used if needed as a tiebreaker.

According to UCSB's [Policies, Procedures, and Best Practices for Academic Recruitments](#), "An open search solicits applications from applicants for the purpose of finding and hiring the best candidate for a position while making good faith efforts towards affirmative action." The department must still make outreach efforts even if there are no specified placement goals for the position.

Hiring for postdocs and technicians, though required by the university to be posted externally as an open search, remain very clouded procedures, potentially leading to nepotism. The "Red Binder" entry for how Postdoctoral scholars are hired to and terminated from EEMB contains appointment criteria in terms of educational requirements. Per the information for faculty on postdoc appointments, postdoc appointment requests are approved by the AVC for Academic Personnel, but how these decisions are made is not provided.

II. Action Items

Faculty Hiring

3.1 A) Support affirmative action and commit to bold hiring targets.

● Commit to searching and hiring from the President's and Chancellor's postdoctoral scholarship programs.

● Commit to broad advertising of posted positions, especially by building collaborations with professional associations like SACNAS, and advertising positions for a sufficient time to attract a diverse candidate pool. The *Best Practices in Faculty Search and Hiring* document from Columbia includes many resources for advertising positions and active recruiting in its appendix.

● Analyze summary statistics of hiring pools and hires from past job searches, and present these statistics transparently in future faculty searches in order to ensure sufficient efforts towards recruitment and to assess departmental biases.

● Any faculty member who does not complete the mandatory anti-racism training should not be allowed to sit on any job search committee, among other restrictions.

● Recognize the many factors that contribute to a person's scientific output and revisit the hiring process to make sure this is being taken into account.

  i. Emphasize what scientists have done with the resources they had available to them. Acknowledge that high-profile science often comes out of institutions with more money and resources and that systemic biases affect quantitative metrics grant funding and citations.

  ii. Acknowledge that dedication to the promotion of DEI can take up time, which could cause the candidate's research to suffer when summarized by metrics such as publication number. Therefore, we urge you to strongly consider applicants' work related to mentorship and service, similarly to faculty members being awarded tenure. A new faculty member will be head of a lab group and therefore a dedication to mentorship (such as of graduate students and postdocs) will likely only increase the scientific output of their group and the department as a PI.

● Revise application review procedures to provide checkpoints against implicit bias. Some of these suggested changes are outlined in a best practices guide from Columbia University.

  i. When reviewing applications: create multiple rankings of candidates based on different criteria. "Rather than a single ranking system based on holistic assessments of candidates, a more objective way to build a shortlist is to rank candidates on different criteria and then choose candidates who rank highly on a number of criteria." This kind of approach could help people to readily visualize the tradeoffs described

above. This also provides a time for the selection panel to assess their implicit bias.

ii. "Create a 'medium' list. Before choosing a shortlist of candidates... If this list lacks women and/or underrepresented minorities, consider more aggressive recruitment efforts before moving to the next phase in the search."

iii. "Revisit top women and underrepresented minority candidates in the pool… to see if evaluation bias played a part in their exclusion from the shortlist."

iv. "Identify a Diversity Advocate…in order to ensure that the search is exhaustive and gives due consideration to all candidates....although all members should be trained on issues of diversity and affirmative action and make certain that best practices in fair and open searches are followed, the diversity advocate can help the committee stay focused on these efforts."

v. Many more such practices are outlined in Columbia University's *Guide to Best Practices in Faculty Search and Hiring* (Columbia University Office of the Provost, 2016).

3.1 B) Require and prioritize contributions to diversity statements ahead of all other statements in the application process for all faculty candidates.

One simple step to take is to *require* that all candidates submit a 'contributions to diversity' statement (as recommended by the UC Academic Council) and have this reviewed first in the process, following the model of UC Berkeley. In addition, it must be understood that faculty evaluating 'contributions to diversity' statements may not be familiar with *how* to do so; time must be spent on learning and discussing how to do this fairly across all candidates, possibly with external input.

Having hiring committees first review a 'contributions to diversity' statement would have the added benefit of acting as a first filter: a way to prevent an initial rosy impression of an impressive publishing record preconceiving an idea of a candidate's quality, a preconception that may allow hiring committees to gloss over the fact that a candidate has not thoughtfully considered *how* they will promote diversity and inclusion in STEM.

3.1 C) Agree to more cluster hires of multiple faculty at a time to reduce isolation and avoid tokenizing faculty from underrepresented groups.

Some university level initiatives that have been successful in improving faculty diversity have leveraged cluster hiring, such as UMASS Boston, University of Hawaii at Manoa, Rutgers University, and Emory University. Cluster hiring has been shown to increase diversity at many institutions both when diversity was a focus of the effort and when it was not. Cluster hiring can make institutions more attractive to minority candidates, who may be deterred from departments and universities where they might be the only minority professor. This practice also provides a greater sense of community due to cluster membership and supports innovative scholarship. There are many additional considerations that must also be factored in with cluster hiring such as tenure evaluation for faculty that are hired across departments to ensure that they are not overworked and unsupported.

The Faculty Cluster Hiring for Diversity and Institutional Climate Report recommends the following practices for developing promising cluster hiring programs. "1. Make diversity goals explicit and develop supporting strategies to achieve those goals; 2. Work to ensure early buy-in from deans and department heads; 3. Engage faculty early in the process and follow the lead of the faculty; 4. Establish and articulate expectations for cluster hires from the very beginning; 5. Give cluster hires credit for work they perform as part of the cluster in the tenure and promotion process; 6. Establish infrastructure to support interdisciplinary collaboration; 7. Communicate the value of the program to stakeholders across the institution; and 8. Develop a plan for sustaining the program throughout leadership changes."

3.1 D) Include student representatives with voting power on hiring committees and increase transparency and feedback throughout the hiring process.

In many past job searches, the perspective of the graduate student body appears to have been at odds with the search committee. One way to ensure that the search committee considers the priorities of the student body would be to allow a graduate student representative to have a counted vote and not just be used as a tiebreaker.

We further urge that graduate students and postdoctoral scholars be included in faculty hiring job searches at every stage of the process, from reading applicant materials to final decisions. Graduate students who commit to anti-racist hiring practices, and complete training, should be allowed to apply for spots on faculty hiring committees. Students and postdocs who serve on such committees should be compensated for their time. Members of the department aside from faculty should be able to give feedback about the candidates based on application materials prior to members of the short list being invited for interviews; one opportunity for this feedback would come at a medium-list stage as described above in Appendix 3.1A.

We ask that data from the searches be compiled and made available to be viewed by the entire department as the search is being conducted to increase accountability and ensure that sufficient recruitment effort was put forth.

3.1 E) Appoint a Vice Chair for DEI in EEMB to facilitate discussions of DEI at the departmental level, particularly during the hiring process, and ensure appropriate training.

As discussed throughout this section, dedication to the promotion of DEI takes up a significant amount of time and the burden of these efforts often falls disproportionately on underrepresented faculty members in many departments. Therefore, a formal position with accompanying responsibilities and compensation (in terms of teaching relief and salary) should be made.

A Vice Chair for DEI would be able to oversee and facilitate the efforts detailed in this appendix (graduate and undergraduate recruitment, curriculum design, anti-racism training, etc.). This position would work with the DEI advocate staff position described below and be focused on the logistics of the departmental changes outlined in this document with particular emphasis on hiring procedures and student recruitment and retention, similar to the Diversity Advocate on hiring committees suggested by Columbia best practices outlined in 3.1 A) above. The department should ensure that any faculty member who fills this position goes through a thorough training process to prepare them for this role, and the department should seek out an external consultant to develop this training.

General Hiring

3.1 F) Hire a permanent DEI advocate staff position to assist with the logistics of the demands laid out in this document, handle complaints, and coordinate DEI efforts.
This position would be responsible for regularly compiling the departmental statistics on recruitment, retention, and hiring discussed in this section and below in accountability, ensuring public dissemination of these statistics on the website and in reports, facilitating the development of the new programs, and being an advocate and liaison for students filing complaints. Applicants for this position should have experience supporting the needs of a diverse student body, and ideally faculty, as well as experience developing programs of the kind described in this document. This position could be a restructuring of the responsibilities of the graduate program advisor position if suitable. This position is essential to help with the weight of the logistical burden of the demands outlined in this document, provide expertise, and keep the department focused on anti-racism goals, though the work of restructuring our departmental culture will have to be adopted in earnest by every individual and lab.

3.1 G) Ensure that faculty teaching core courses for graduate students (see Appendix 2.1) have the training and depth of knowledge to do so within an anti-racist framework.

New core course requirements for graduate and undergraduate students will require faculty to teach them. These faculty must have the training necessary to teach

courses on the history of racism in STEM and academia and the way that racism, colonialism and anti-Blackness function in STEM. The courses should also include anti-racism training beyond implicit bias training that is specific to academic and scientific spaces. EEMB must accept both the internal work and external collaborations necessary to ensure these faculty are appropriately prepared. To facilitate the effective delivery of these courses, EEMB faculty should seek out collaborations with professors in other departments such as sociology and the history of science, or affiliate faculty with the required expertise. Similar courses in other departments could be cross-listed for this requirement. Consultants may also have the necessary expertise; EEMB should make funding available to pay consultants or affiliate faculty for their expertise in developing these courses and helping to prepare faculty for teaching them.

3.1 H) Increase transparency in the existing postdoc and research staff hiring process to reduce nepotism.

Racial and gender biases are rampant in postdoc recruitment and the opaque way that these recruitments are conducted contributes to the diversity bottleneck in academia. There is a steep decline in the percentage of underrepresented minorities at each consecutive career level.

We demand a commitment to open searches for postdoctoral scholars and research staff. Clear guidelines and practices for recruitment and hiring should be laid out and made publicly available to encourage fair recruitment and transparency. When an open search is conducted, jobs should be posted for a sufficient period of time to recruit a diverse pool and effort should be made to advertise broadly, including advertising targeted towards underrepresented candidates.

III. Examples

Diversity Statements:

- UC Berkeley not only requires contributions to diversity statements but reviews these documents first in hiring procedures; if candidates do not make it past this original round of review then the rest of their application is not considered.

- UC Berkeley built a rubric for evaluating contributions to diversity statements.

- UC Berkeley and UCSD are the only two UCs that actually provide guidance both to applicants on preparing these statements and to search committees on how to assess them.

- UCB, UCSD, UCD, UCI, UCLA, UCM, UCR, UCSF and UCSC all require diversity statements.

- The UC Academic Senate provides recommendations for the use of Contributions to Diversity, Equity, and Inclusion (DEI) Statements for Academic Positions at the University of California.

- Emory University in their cluster hiring initiative required a statement from candidates "about their experience with, and vision for, mentoring students from underrepresented backgrounds," and did not review the rest of the application unless this statement was strong.

- UC Davis requires and places emphasis on contributions to diversity statements.

Cluster Hiring:

- The University of Massachusetts Boston saw improvements in faculty diversity after leveraging cluster hiring.

● Emory University increased the percentage of tenure track faculty hires from underrepresented groups from 15% to 51% in the first 3 years since incorporating cluster hiring with other hiring methods. (Women of all racial and ethnic groups were included in that designation in STEM fields but not other fields.)

● NIH's new cluster hiring initiative Faculty Institutional Recruitment for Sustainable Transformation (FIRST) seeks to ensure "every person hired must have a track record of working to change a culture that too often makes scientists from underrepresented groups feel unwelcome on campus and isolated in the laboratory."

● The Faculty Cluster Hiring for Diversity and Institutional Climate Report conducted by the Urban Universities for Health, the Coalition of Urban Serving Universities, the Association of Public and Land Grant Universities, and the Association of American Medical Colleges found that cluster hiring also influenced the perception of the value of diversity at higher administrative levels in the university and led increased diversity-focused efforts across the university, such as university-wide unconscious bias training for search committees across North Carolina State University. It contains recommendations for developing successful cluster hiring programs.

Re-assessing hiring practices:

● Best practices for Faculty Search Hiring from Columbia University.

Including graduate student feedback throughout hiring processes:

● A panel of graduate students evaluates potential faculty hires at UC Berkeley's College of Chemistry. "Six students were selected to serve on a committee to interview the faculty candidates in each field of hire, using a list of formalized questions that address their research, service, teaching, mentorship, and contributions to diversity."

● Graduate students who commit to anti-racist hiring practices are allowed to apply for spots on faculty hiring committees in some UCLA departments such as in the Higher Education and Organizational Change division. Source: Letter Demanding Action on Increasing Diversity in the Physical Sciences, by UCLA students.

Transparency in postdoc recruitment:

● The Steering Group of Human Resources Management under the European Research Area provides a resource for the Open, Transparent, and Merit Based Recruitment of researchers.

● The UC Berkeley Office for Faculty Equity and Welfare provides resources for broad recruitment.

3.2) Modify procedures for faculty tenure and career advancement

I. Current practices

The principal criterion for promotion to tenure in the Professorial series is succinctly stated in the following passage from APM 210-1 d:

"Superior intellectual attainment, as evidenced both in teaching and in research or other creative achievement, is an indispensable qualification for appointment or promotion to tenure positions. The other criteria for review, namely professional activity and University service, must be given due consideration, but they can never be considered sufficient in and of themselves to justify promotion to tenure. Superior intellectual attainment in teaching and in research or other creative achievement as noted above are essential for promotion to tenure."

II. Action items

3.2 A) Incorporate DEI work into advancement and promotion.

Explicitly acknowledge that emotional labor by faculty of color (including being asked to provide guidance to other faculty and providing additional support to students) should count as service. This written commitment can be incorporated as a type of "University Service" (the only tenure requirement not elaborated on in the UCSB faculty handbook). Both informal emotional labor and formal committee work fall disproportionately on underrepresented faculty, especially when the faculty does not reflect student body diversity (Social Sciences Feminist Network Research Interest Group, 2017; Jimenez et al. 2019). This work must be shared equitably among all faculty members; therefore, the department must keep track of service responsibilities asked of faculty, attempt to redistribute this labor, and heavily weight this contribution in promotion cases. Faculty being considered for a promotion should address their efforts to promote inclusivity in their research and teaching environments in their tenure portfolio.

3.2 B) Establish a comment period when a faculty member is up for promotion.

When a faculty member is being considered for promotion there should be a period during which staff and students within the department community can register concerns, with protection from retaliation, regarding discriminatory behavior or harassment. These comments should be taken into serious consideration when awarding promotion and tenure.

III. Examples

● Pomona College has revised their tenure requirements to include that faculty are "attentive to diversity in the student body."

● Oregon State University modified their criteria for promotion in 2015 to require that "Stipulated contributions to equity, inclusion, and diversity should be clearly identified in the position description so that they can be evaluated in promotion and tenure decisions. Such contributions can be part of teaching, advising, research, extension, and/or service. They can be, but do not have to be, part of scholarly work. Outputs and impacts of these faculty members' efforts to promote equity, inclusion, and diversity should be included in promotion and tenure dossiers."

References

Columbia University Office of the Provost. (2016). Guide to Best Practices in Faculty
  Search and Hiring.

Jimenez, M. F., Laverty, T. M., Bombaci, S. P., Wilkins, K., Bennett, D. E., & Pejchar, L.
  (2019).

June, Audrey Williams. "The Invisible Labor of Minority Professors." *Chronicle*, 8 Nov.
  2015, www.chronicle.com/article/The-Invisible-Labor-of/234098. Accessed 29
  June 2020.

Langin, Katie. "Racial and Gender Biases Plague Postdoc Hiring." *Science | AAAS*, 3
  June 2019, www.sciencemag.org/careers/2019/06/racial-and-gender-biases-
  plague-postdoc-hiring. Accessed 29 June 2020.

Matthew, Patricia A. "What Is Faculty Diversity Worth to a University?" *The Atlantic*, 23
  Nov. 2016, www.theatlantic.com/education/archive/2016/11/what-is-faculty-
  diversity-worth-to-a-university/508334/. Accessed 25 May 2020.

Reed, A. M., & Tull, R. G. (2012, July). Reducing the Bottleneck… Breaking the Bottle!
  Addressing the Recruitment of Postdocs through Best Practices of AGEP and
  ADVANCE Horizons Programs. In *Getting to the Heart of it All: Connecting
  Gender Research, WIE Programs, Faculty, & Corporate Partners*.

Rivers, E. (2017). Women, minorities, and persons with disabilities in science and
  engineering. *National Science Foundation*.

Social Sciences Feminist Network Research Interest Group. (2017). The burden of
  invisible work in academia: Social inequalities and time use in five university
  departments. *Humboldt Journal of Social Relations*, *1*(39), 228–245.

Underrepresented faculty play a disproportionate role in advancing diversity and
  inclusion. *Nature Ecology and Evolution*, *3*(7), 1030–1033.
  https://doi.org/10.1038/s41559-019-0911-5

University of California Santa Barbara. "Assistant Level Faculty Position – Freshwater
  Ecology." *Ecology, Evolution and Marine Biology | UC Santa Barbara*, 7 Nov.
  2017, www.eemb.ucsb.edu/jobs/2019/jpf01619. Accessed 29 June 2020.

University of California Santa Barbara. *Academic Recruitments: Policies, Procedures,
  and Best Practices*. 6 Sept. 2019.

University of California Santa Barbara. *Red Binder: Policies and Procedures for
  Academic Personnel*. Sept. 2018.

University of California Santa Barbara. *Working with Postdoctoral Scholars*. Nov. 2015,
  ap.ucsb.edu/resources.for.department.analysts/postdoctoral.scholar.appointments/postdoc.employment.info.for.fa

University of Oregon Social Sciences Feminist Network Research Interest Group. "The
  Burden of Invisible Work in Academia: Social Inequalities and Time Use in Five
  University Departments." *Humboldt Journal of Social Relations*, vol. 1, no. 39, 18
  May 2017, pp. 228–245, digitalcommons.humboldt.edu/hjsr/vol1/iss39/21/.
  Accessed 29 June 2020.

Urban Universities for Health. (2015). Faculty Cluster Hiring for Diversity and
  Institutional Climate, (April).

Yadav, A., Seals, C. D., Sullivan, C. M. S., Lachney, M., Clark, Q., Dixon, K. G., &
  Smith, M. J. (2020). The Forgotten Scholar: Underrepresented Minority Postdoc
  Experiences in STEM Fields. *Educational Studies*, *56*(2), 160–185.

Appendix 4. Culture and Capacity Building

"There is a culture that makes EEMB a hostile place if you don't exactly fit the mold."
- Graduate student #5

"While there are definitely administrators and faculty that are supportive, the department as a whole lacks a cohesive message or support system for students from underrepresented backgrounds." - Graduate student #18

"[Lack of department diversity] is due to a lack of active recruitment outside of personal networks as well as a culture within the department that is dismissive [of the lack of diversity]." - Graduate student #28

"There seems to be support that has been built by the graduate students, and not necessarily by faculty or administration." - Graduate student #16

2019 EEMB DEIW Departmental Climate Survey

Overview

To dismantle the current structures in EEMB that positively benefit the white majority and negatively impact Black and other underrepresented minority students, we need to clearly identify the differences in experiences leading up to enrollment and within EEMB. Systemic disparities such as unchecked biases, harassment of underrepresented students, barriers to entry due to income (see racial wealth gap), and many other legacies of white supremacy continue to present substantial barriers to department-wide equity. Our department still requires multi-faceted and systematic improvement to create a welcoming and equitable environment for students from underrepresented backgrounds. Unequal attention to these issues among faculty members has resulted in glacial progress towards creating an anti-racist culture.

As a whole, EEMB lacks a cohesive message of inclusion or support system for students from underrepresented backgrounds. To address this deficiency, we need to overhaul the training requirements in our department for students, staff and faculty. We demand more rigorous and consistent anti-racism and implicit bias training for our entire department, in collaboration with on-campus resources such as the Faculty Equity Advisor and other growing programs. Furthermore, we encourage the posting of workshops and events with such goals on listservs and other EEMB communications. We have divided Appendix 4, detailing these demands, into the following subsections: 4.1) Active anti-racism programming in EEMB, and 4.2) Student retention.

4.1) Introduce active anti-racism programming in EEMB

I. Current practices

To be anti-racist is to be both aware of race and racism and to actively fight against racial inequities (Singh, 2019). Based on this definition, anti-racist training should equip participants with the skills to acknowledge race, recognize racism and racial inequities, and actively challenge and dismantle these issues in their daily lives. To our knowledge, there is no current mandatory anti-racism training offered at the departmental or university level; however, we understand conversations regarding the adoption of some form of regular training (e.g., Crossroads training) are on the horizon. The current options for anti-bias training on the campus level include a required online module addressing many topics for incoming students and an optional 6-course module through the UC Learning Center. Neither of these modules specifically address anti-racism or are required to be taken more than once.

Anti-racism training falls under the policies covered by UCSB Office of Equal Opportunity & Sexual Harassment that seeks to 'ensure nondiscrimination in the workplace' and 'support workplace equity initiatives'. Anti-racism training at the EEMB department level is one component that faculty, staff, and students should participate

in with regards to the 'management and value of diversity initiatives' put forth by the mission of equal employment opportunity (EEO).

II. Action items

To foster a culture of anti-racism, ensure that the department addresses systemic racism, and continually progresses towards (and retain) a more diverse community, we demand the following actions:

4.1 A) Ensure a mandatory, yearly anti-racism training for all faculty, staff, and students.

● The department can work with the current Faculty Equity Advisor for the College of Letters & Science, UCSB Human Resources, and the EEMB DEIW committee to implement an annual mandatory anti-racism training for faculty, staff, and students prior to the start of each academic year. Annual anti-racism training can be implemented through an on-campus workshop, retreat, or online training via Zoom. The training would educate participants on how racism functions in institutions and how to continually work toward transforming UCSB into an anti-racist institution. Faculty who do not complete this training should be unable to serve on hiring committees as well as be unable to accept new students.

● The department can promote additional sensitivity and implicit bias training for faculty and staff to encourage anti-racist attitudes in all of their students, not just specific groups. Implicit bias training can be extended to the classroom, using apps such as EQUIP (For thoughts, the department can reach out to San Diego State's Math department which has already implemented this app in classrooms to train professors). With this training, the DEI Vice-Chair and advocate can create ally packets and specific resources to distribute to all members of the department on active learning training techniques which have been shown to increase retention in learning.

4.1 B) Create open discussion sessions for all faculty, staff, and students.

● We propose that the department create a discussion series (in addition to the quarterly seminar discussed in appendix 2.4) focused on creating space for members of the department to have open conversations about issues of diversity, equity, and inclusion in academia, and particularly in the EEMB department. Topics may include, but are not limited to, white fragility, micro and macro aggressions, and color-blind racism. Discussion sessions should be held at least once per quarter with an external facilitator(s).

4.1 C) Promote anti-racism events held by the Multicultural Center.

● In the future, EEMB should promote and advertise anti-racism workshops and events occurring on campus through the bionews, eembgrads, and eembfaculty listservs. Events at the Multicultural Center such as seminars like 'Antiracism Inc.: Why the Way We Talk about Racial Justice Matters' by Felice Blake, Paula Ioanide, Alison Reed, should be promoted and EEMB department members encouraged to attend.

III. Examples

Anti-racism Trainings:

● The Oregon State University Social Justice Education Initiative provides OSU faculty, staff, and graduate students with coaching, consultation, and facilitated learning opportunities to meet their commitment to inclusive excellence and increase their capacity to support undergraduate students.

● The Professional Learning Committee within the College of Earth, Ocean, and Atmospheric Sciences at Oregon State University hosts an Unpacking Diversity Seminar Series. This series has featured sessions on micro and macro aggressions, white supremacy, white fragility, etc. Students, Faculty, and Staff are invited to participate in a facilitated discussion to gain a deeper understanding of issues of diversity, equity, and inclusion particularly pertaining to differently abled people, BIPOC, and the LGBTQIA+ community.

● Racial Equity Tools (RET) is a website that provides thousands of resources for EEMB to use in cultivating and sustaining an anti-racist culture in our department.

● Illinois-based Crossroads Antiracism Organizing & Training has worked with governmental, educational, faith-based, and non-profit organizations to provide antiracism training, organizing, and consulting to strive to dismantle racism. Crossroads offers individual and team workshops over one or multiple days. Some workshop titles include: *Introduction to Systemic Racism*, *Critical Cultural Competency*, and *AntiBias AntiRacist Education*.

● The Building University of Iowa Leadership for Diversity (BUILD) Certificate Program allows faculty and staff to participate in workshops in order to gain a better understanding of the experiences of marginalized communities and gain skills, strategies, and best practices for building and supporting diverse teams. To earn a certificate from this program, participants are required to complete their *Beyond the Numbers: Foundations for Diversity, Equity, and Inclusion* as well as five elective courses. Elective courses include topics on racism, rape culture, unconscious bias, appropriation, and supporting undocumented students.

● Characteristics of White Supremacy Culture lists some common ways that white supremacy appears in daily work life and is perpetuated by those in positions of power. This resource would be useful in facilitating understanding of implicit bias by faculty.

● The Borderland Rainbow Center offers free anti-racism training for students as 3 modules. In these modules, participants will:
   ○ Learn about historical events, ideologies, and social structures, and how they inform modern day beliefs, bias, and perception.
   ○ Analyze concepts of racial identity, bias, privilege, and prejudice
   ○ Reflect on their own identity, bias, privilege, and prejudice
   ○ Identify strategies to engage in difficult conversations
   ○ Reflect on ways to integrate anti-racism work into their daily lives

● UCSB's Office of Black Student Development has an Anti-Blackness Education Series which provides anti-racism resources for white people:
   ○ List of books, podcasts, articles, videos, films/TV series, organizations to follow on social media, and other anti-racism resources.

● The Anti-Racism Project provides trainings, workshops, readings, and other resources to address racial biases.

● Project implicit offers an implicit bias test series to measure personal levels of implicit bias against various groups of people.

● The UCSB library is providing resources on Race, Racial Relations, and the Black Experience in the US to quickly find and discover information regarding anti-racism resources

● The annual Diversity Matters Series at UCSB includes various interactive Theater Delta presentations addressing different aspects of implicit bias, which are an engaging way for people to recognize biases across different scenarios and provide examples for how to challenge these biases.

4.2) Support student retention

I. Current practices

It is essential to serve as advocates for students from underrepresented backgrounds in STEM fields and particularly in the EEMB department at UCSB. Students from historically marginalized communities must receive academic, emotional, and financial support throughout their academic career at UCSB. A lack of support contributes to a student's decision to leave the program prematurely—for example, Black and Latinx STEM students are more likely to switch programs and earn degrees in other fields when compared to their white peers (Riegle-Crumb et al. 2019). Additionally, compared to white students and minority students in other fields, STEM minority students are more likely to leave school without a degree (Riegle-Crumb et al. 2019). Furthermore, Black and Latinx students often have to heavily rely on coping strategies to reject stereotyping (Beasley and Fischer, 2012) and racial microaggressions that are often present in STEM fields, which can result in isolation or altering racial identities while causing lasting psychological strain (McGee, 2016). Holistic support through enrichment programs addressing student academic success, science identity, sense of belonging, and proactive care in advising and student services can help to resolve issues in retention in STEM (Lane, 2016). Currently, we are unaware of any student retention programs or initiatives put forth by the EEMB department.

At the university level, the UCSB Graduate Scholars Program (GSP) strives to provide support to incoming graduate students from historically underrepresented backgrounds in their respective fields. Additionally, the NSF AGEP California HSI Alliance creates a pipeline for Hispanic/Latinx/Chicanx senior doctoral students by connecting them with CSU faculty career mentors, pedagogical training, and providing social and networking support. Though both are excellent resources for doctoral students, these programs are not EEMB-specific, making them insufficient to address issues of student retention within our department.

At the moment, it appears funding for diversity initiatives comes on a lab-by-lab basis with no central resources or overarching departmental support. Consequently, there are faculty members engaged in these efforts on an individual basis (e.g., NSF FUERTE grant through Gretchen Hofmann, Hillary Young, and Doug McCauley, NSF Global Change REU through Gretchen Hofmann), and there is currently no department-wide effort to adopt long-term programming or solutions toward underrepresented student funding and retention. On this front, however, the department plans to submit a proposal during the 2021–2023 funding cycle for the NSF INCLUDES program, which aims to support DEI in STEM.

II. Action items

We urge the EEMB department to identify disparities for minority students and transparently commit to a plan to increase support of students from underrepresented communities in order to develop, strengthen, and retain a more diverse, inclusive, and equitable department. Specifically, we propose the following actions.

4.2 A) Identify disparities for underrepresented students.

- Acknowledge differences in academic performance as failings of the institution to adequately deliver teachings to all groups within EEMB.

● Release an "Annual Disparities Report" to effectively identify and correct for disparities experienced by underrepresented students in EEMB undergraduate and graduate programs. This report will include the academic performance of all students broken up by demographics at the aggregate and course level in a manner that does not compromise student privacy.

● Use the data from this report to actively improve course pedagogy aimed at resolving inequities due to students' backgrounds.

● We demand that the report be shared with all members of the EEMB department and its associates (IGPMS and otherwise) and publicly accessible on the EEMB website, in accordance with the transparency principles outlined in Appendix 5.2.

4.2 B) Ensure safe discussion spaces for Black and Indigenous People of Color in the department.

Provide consistent platforms for Black and Indigenous students and faculty, and other minority-ethnic academics, to anonymously discuss their experiences in the department, respective research labs, and with their advisors.

4.2 C) Provide peer mentorship and mentorship "families" for incoming students.

Implement a mentorship program within EEMB that allows incoming graduate students from historically marginalized communities to be paired with a peer mentor within the department who is representative of a historically marginalized community or a confirmed ally to support the students throughout their graduate education. Following the example of the University of Michigan's Frontiers Masters program in EEB, EEMB faculty will organize mentorship "families." Incoming students wishing to join a mentorship program may submit an application detailing their identities and background and will be paired appropriately. These mentorship groups will meet at least once a quarter to discuss degree progress, difficulties, and generally provide support to the students.

4.2 D) Implement a funded transition program for underrepresented students.

Collaborate with departments within the College of Letters and Science to implement a summer transition program for newly admitted underrepresented graduate students in STEM. In addition to a research project, this funded program must provide fellows with social and professional development activities to enhance success in respective graduate programs.

4.2 E) Create and maintain a resource of information on funding for underrepresented students.

We also demand that the EEMB department advisor create a **central resource** relevant to EEMB funding for undergraduate students, incoming and continuing graduate students, international students, postdocs, and faculty with sample winning proposals. This resource should include information specifically for students from underrepresented backgrounds. It is essential that this resource be continually updated and maintained. In Appendix 5, we have compiled examples of efforts from similar departments at other schools to address DEI issues with long-term, consistently funded programming.

III. Examples

Identifying disparities:

● Mike Wilton and Eduardo Gonzales-Niño in MCDB at UCSB research retention rates of underrepresented students and first-generation students within the major. They also focus on ways to improve these rates.

● Example data report of admission and enrollment data within EEMB. Additional higher resolution data within UCSB and publicly available data from other universities would also be included in the Disparities Report

● An example of a historical context that would be necessary in the Disparities Report, to assess progress of the program

Safe discussion spaces and listening to underrepresented students:

● As a starting point, Nature has published an article with the experiences of six Black scientists. This article sets a tone for listening, inclusion and action towards equity in science that EEMB should emulate.

● The DEIW committee is a great example of listening to voices within the department.

● This paper, written by scientists of color, describes ten actions that can help build anti-racist lab groups. This is an example of actions to take after clearly defining disparities in academic culture.

Mentoring, transition, and funding programs:

● The NSF AGEP California HSI Alliance connects four Hispanic Serving Institutions: UCSB, UC Merced, CSU Fresno, and CSU Channel Islands with the goal of diversifying the STEM faculty workforce by preparing Latinx senior doctoral students for teaching-focused careers through pedagogical training and career mentoring.

● The UCSB Graduate Scholars Program assigns senior doctoral students to a small group of incoming graduate students who are from populations historically underrepresented in academia. These mentoring families meet monthly throughout the year and have access to academic and professional development activities.

● The UCLA Competitive Edge program is a six week bridge program for incoming doctoral students in the STEM field. Students are paired with a faculty mentor to complete a summer research project and are expected to participate in social and professional development activities. UCLA Competitive Edge Fellows are provided with a summer stipend of $6000, advanced introduction to UCLA peers, faculty, campus, and campus resources, early mentorship from UCLA faculty, community building, and access to workshops and lectures.

● The Louis Stokes Alliance for Minority Participation (LSAMP) Bridge to the Doctorate Program at UCSB provides support to LSAMP graduates who choose to pursue a Ph.D. at UCSB in STEM. This program provides an annual stipend of $32,000 plus full tuition, fees, and health insurance for 2 years, support through a mentoring community, professional development and career preparation, and participation in professional conferences.

● The STEM Bridge Scholarship for MSI Students Program implemented by NC Space Grant is for underrepresented undergraduate students in STEM. The STEM Bridge Scholarship provides financial support, connects students to faculty and peers conducting research, and promotes STEM-related careers with the purpose of diversifying the STEM workforce.

● The University of California President's Postdoctoral Fellowship Program (PPFP) provides postdoctoral research fellowships, faculty mentoring, and professional development activities to encourage women and racial and ethnic minority Ph.D. recipients to pursue careers at the University of California.

● As a Minority Serving Institution, UCSB compiles additional resources and opportunities on a central page.

References

Allen-Ramdial, S.A., & Campbell A.G. (2014) Reimagining the pipeline: advancing STEM diversity, persistence, and success. BioScience, 64(7), 612–618. https://doi.org/10.1093/biosci/biu076.

Beasley, M.A., & Fischer, M.J. (2012). Why they leave: the impact of stereotype threat on the attrition of women and minorities from science, math and engineering majors. *Social Psychology of Education*, *15*, 427–448. https://doi.org/10.1007/s11218-012-9185-3

Crossroads. "Dismantling Racism, Building Racial Justice in Institutions." *Antiracism Organizing and Training*, 2020, crossroadsantiracism.org/. Accessed 29 June 2020.

EQUIP. "EQUIP App." *Empowered Teachers, Equitable Classrooms*, 2018, www.equip.ninja/.

Estrada, M., Burnett, M., Campbell, A. G., Campbell, P. B., Denetclaw, W. F., Gutiérrez, C. G., Hurtado, S., John, G. H., Matsui, J., McGee, R., Okpodu, C. M., Robinson, T. J., Summers, M. F., Werner-Washburne, M., & Zavala, M. (2016). Improving Underrepresented Minority Student Persistence in STEM. *CBE life sciences education*, *15*(3), es5. https://doi.org/10.1187/cbe.16-01-0038

Funk, Cary, and Kim Parker. "Blacks in STEM Jobs Are Especially Concerned about Diversity and Discrimination in the Workplace." *Pew Research Center's Social & Demographic Trends Project*, Pew Research Center, 9 Jan. 2018, www.pewsocialtrends.org/2018/01/09/blacks-in-stem-jobs-are-especially-concerned-about-diversity-and-discrimination-in-the-workplace/.

Lane T. B. (2016). Beyond Academic and Social Integration: Understanding the Impact of a STEM Enrichment Program on the Retention and Degree Attainment of Underrepresented Students. *CBE life sciences education*, *15*(3), ar39. https://doi.org/10.1187/cbe.16-01-0070

McGee, E.O. (2016). Devalued Black and Latino Racial Identities: A By-Product of STEM College Culture? *American Educational Research Journal*, *53*(6), 1626-1662. https://doi.org/10.3102/0002831216676572

McKernan, Signe-Mary, et al. "Nine Charts about Wealth Inequality in America (Updated)." *Urban.Org*, 4 Oct. 2017, apps.urban.org/features/wealth-inequality-charts/.

National Science Foundation. "Inclusion across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science." *NSF - National Science Foundation*, www.nsf.gov/funding/pgm_summ.jsp?pims_id=505289. Accessed 29 June 2020.

Prince, M. (2004) "Does Active Learning Work? A Review of the Research." *Journal of Engineering Education*, 93(3), 223–231.

Riegle-Crumb, C., King, B., & Irizarry, Y. (2019). Does STEM Stand Out? Examining Racial/Ethnic Gaps in Persistence Across Postsecondary Fields. *Educational Researcher*, *48*(3), 133–144. https://doi.org/10.3102/0013189X19831006

University of California. "UC Managing Implicit Bias Series." *UCNet*, 2020, ucnet.universityofcalifornia.edu/working-at-uc/your-career/talent-management/professional-development/managing-implicit-bias.html. Accessed 29 June 2020.

University of California Merced. "Meet the Institutions." *NSF AGEP California HSI Alliance*, 2020, hsi-agep.ucmerced.edu/about/institutions. Accessed 29 June 2020.

University of California Santa Barbara. "UCSB Mandatory Education." *Orientation Programs and Parent Services*, 2019, orientation.sa.ucsb.edu/resources-info/new-student-requirements/ucsb-mandatory-education. Accessed 29 June 2020.

University of California Santa Barbara. "Graduate Scholars Program." *UCSB Graduate Division*, 2014, www.graddiv.ucsb.edu/admissions/diversity/graduate-scholars-program. Accessed 29 June 2020.

University of Michigan. "Frontiers Program." *U-M LSA Ecology and Evolutionary Biology (EEB)*, 2020, lsa.umich.edu/eeb/graduates/prospective-students/program-overviews/frontiers-program.html. Accessed 29 June 2020.

Woodhouse, Kellie. "New App Promotes Equity in the Classroom." *NewsCenter*, SDSU, 15 Jan. 2019, newscenter.sdsu.edu/sdsu_newscenter/news_story.aspx?

sid=77500. Accessed 29 June 2020.

Appendix 5. Accountability and Evaluation

Overview

Diversity, Equity, and Inclusion (DEI) initiatives at the campus level have de-emphasized anti-Black racism and the legacy of white supremacy as root causes of racial inequity in academia (University of California Diversity Statement, 2006), failing to denounce the entrenchment of our country's racist history in university culture. No scientific institution can be anti-racist—nor effectively advance racial equity—without first confronting its complicity in upholding systemic racism. This process demands transparency, internal and external evaluation, and public accountability. We therefore lay out a strategic plan to foster accountability and transparency in our departmental procedures through internal and external reviews and publicly-available reporting of hiring and demographics. We demand these reviews and reporting be posted on our EEMB web page to make them as accessible as possible and to hold our department to their commitments going forward. We also include a call for transparent reporting within the program to ensure accountability among our students, staff, and faculty.

5.1) Endorse evaluation by the DEIW committee

"There are strong themes that...perhaps hasty and uncoordinated, attempts have been made by EEMB to address the experiences of [underrepresented] groups in graduate school and that they have often not included faculty." - Graduate student #25

2019 EEMB DEIW Departmental Climate Survey

I. Current practices

Graduate students formed a working group last year (2019) to address issues of diversity, equity, inclusion, and student wellness (DEIW) within our department. DEIW committee met weekly to develop a survey on the current departmental climate. The survey was active for 3 weeks in November 2019 and received 45 responses out of a total 96 graduate students then enrolled in the department. Survey results highlighted widespread agreement among graduate students that diversity, equity, and inclusion in our department can and should be improved. The committee plans to share survey results and have an open discussion with the department in the form of a town hall meeting, which has been delayed due to the coronavirus pandemic. To our knowledge, such a committee did not exist previously for graduate students or faculty.

II. Action items

5.1 A) Collaborate with the DEIW committee.

We ask that faculty join in the efforts of the graduate students on the Diversity, Equity, Inclusion and Wellness committee to improve department culture regarding diversity, equity, inclusion, and wellness. Work to improve the department in these respects should not fall exclusively on graduate students, as this would constitute a disproportionate burden on students and could affect progress towards degree completion, as well as endanger the progress of long-term change across generations of graduate students. Additionally, faculty representation on such committees has precedent (e.g., Bren). We ask that:

● Two faculty members serve as members of this committee, liaising with representatives from the committee and attending meetings at least quarterly.

● Departmental support be provided for scheduling/management of the town hall meetings.

5.1 B) Grant the DEIW committee additional departmental responsibility.

We ask that the DEIW committee is granted the following department-sanctioned powers and responsibilities:

● Conduct an internal evaluation of EEMB's commitment to and efficacy in supporting DEI. This internal evaluation will be led by the EEMB DEIW committee, explicitly involving Black students and Black members of the campus community. An information session reporting the results of these internal evaluations will be held every year.

● Send a student representative from this committee to all faculty meetings.

● Receive the results of EEMB's external reviews in a timely fashion.

● Make recommendations for changes in department culture that are presented at faculty meetings, and receive timely responses from faculty detailing how the department will address these changes.

III. Examples

● The Bren School Diversity Committee serves as an example of shared responsibility between faculty, students, and staff.

● The Diversity Committee within the EEB department at the University of Michigan consists of multiple faculty and graduate student members.

● UCLA Higher Education Research Institute administers a Diverse Learning Environments survey for colleges. This is essentially a professional and more extensive version of the climate survey that the EEMB DEIW committee took time out of their personal lives to create and administer. UCSB should look to UCLA as an example and implement these surveys on a campus-wide level, rather than leaving the burden of this institutional level task on graduate students.

5.2) Create internal and external forms of accountability

I. Current practices

To our knowledge, EEMB has not provided public information on its strategies to advance racial equity among faculty, staff, and graduate students, nor does it have systems of evaluation and public accountability in place to ensure adequate progress on stated commitments. Three EEMB web pages present overviews of our program's mission, research, and curriculum, but do not specifically address anti-racism, diversity initiatives, equity or inclusion, or support for underrepresented students. EEMB web pages state that our department's "appreciation for interdisciplinary approaches to research" (EEMB "Graduate Program") leads us to develop "foundational knowledge for addressing some of the world's most pressing environmental issues" (EEMB "About"). However, this foundational knowledge does not currently extend to any exploration of the racist frameworks that underlie our fields. The EEMB "Undergraduate Program" site boasts that our department is located "amid a historically diverse and culturally sophisticated local community," implying that its authors recognize at least the promotional value of diversity.

Despite the occasional "cultural diversity" references in EEMB web pages, there are no mentioned actions nor commitments to address the glaring racial inequities and systemic racism pervasive across STEM. Instead, the departmental website is exclusively dedicated to showcasing EEMB faculty, undergraduate and graduate programs, and research output, implicitly ascribing to the pervasive (but ill-informed) view that scientific research can be dissociated from the social, political, and cultural context in which it takes place.

There is also no public information about a department-specific channel for addressing complaints of bias. While a UC-wide bias incident reporting system does exist, such reporting may be intimidating to victims unsure of the consequences of initiating a complaint process. In addition, a departmental intermediary would provide increased accountability and transparency within EEMB and allow us to hold our community to a higher standard. Under the current system there is little recourse for victims of bias whose complaints are not appropriately addressed, and victims may hesitate to report through unofficial channels due to severe power imbalances and fear of repercussions.

II. Action items

We call on the EEMB department to acknowledge its shortcomings in fighting systemic racism, and urge faculty to make transparent, public, and accountable commitments to anti-racist action. Specifically, we demand the following departmental actions:

5.2 A) Increase structures of internal accountability.

    i. Following the anti-racism training for faculty, create an anti-racist and anti-discriminatory code of conduct that all members of the department are required to sign. The code of conduct must include actionable repercussions for violations regardless of current career level and tenure status.

    ii. Implement departmental processes for reporting violations of the code of conduct that encourage reporting and keep reportees safe from retaliation.

        a. Hire a departmental DEI advocate as the member of staff in charge of managing all incidents, and notify all members of the department regarding their duties; this is further discussed in Appendix 3.1G.

        b. Take all necessary measures to support victims of racist and discriminatory incidents.

c. Follow through on all outlined repercussions to all racist and discriminatory incidents as outlined by the anti-discriminatory code of conduct.

d. Send an annual report to the faculty, students, and staff summarizing incidents reported to the department, along with how the department managed these incidents, with the primary goal being protecting victims of bias and discrimination.

iii. Include graduate student representatives from both GSAC and the DEIW committee in each faculty meeting.

iv. Solicit and conduct an external review of EEMB's commitment to and efficacy in supporting DEI at least every four years.

a. These external reviews should be conducted by a trained third party hired by EEMB, the College of Letters and Sciences or the university (see UCSB Diversity, Equity, and Inclusion Consulting).

b. An information session reporting the results of these evaluations should be held following the completion of each review.

5.2 B) Demonstrate accountability externally and to the general public.

i. Publish the results of internal (DEI) and external evaluations, including posting results on the EEMB website.

ii. Add a DEI section to the EEMB departmental website (see Appendix 1.1).

iii. Collect demographic information of faculty, students, undergraduate researchers, staff, and applicants every year and make it publicly available on the EEMB website.

a. Acknowledge on the departmental website that the proportion of BIPOC in the state does not match up with the representation in our department or at UCSB.

b. UCOP presently reports some of these metrics for EEMB, but it releases information with a 2–3 year lag such that the only information available to us is from the 2016–2017 year. Additionally, this report contains almost no information about the race and gender of applicants that are rejected or declined acceptances (University of California Office of the President, 2018).

III. Examples

Public anti-racist action commitments in Academia:

● The University of Illinois – Psychology Department, Anti-Racism Action Plan.

● Yale University – School of Nursing, Initial Anti-Racism Action Plan.

● New York University – School of Social Work, Commitment to Social Justice, Inclusion and Belonging.

● Loyola University Chicago – Center for Experiential Learning, Commitment to Diversity, Inclusion, Equity, Anti-Racism and Anti-Oppression Statement.

● University of South Florida – English Department, Anti-Racism Commitment.

References

Griffin, Kimberly A. "Addressing STEM Culture and Climate to Increase Diversity in STEM Disciplines." *Higher Education Today*, 23 Apr. 2018, www.higheredtoday.org/2018/04/23/addressing-stem-culture-climate-increase-diversity-stem-disciplines/. Accessed 29 June 2020.

Higher Education Research Institute. "Diverse Learning Environments Survey." *HERI UCLA*, 2020, heri.ucla.edu/diverse-learning-environments-survey/. Accessed 29 June 2020.

NAVEX Global. "University of California System." *Campus Climate Report Form*, 2020, ucsystems.ethicspointvp.com/custom/ucs_ccc/form_data.asp. Accessed 29 June 2020.

Office of Budget & Planning. *UCSB Academic Unit Profile: Ecology, Evolution, and Marine Biology*. University of California Santa Barbara, 5 Mar. 2018.

Sabbagh, Ubadah. "Science Has Always Been Inseparable from Politics." *Scientific American Blog Network*, 25 Apr. 2017, blogs.scientificamerican.com/guest-blog/science-has-always-been-inseparable-from-politics/. Accessed 29 June 2020.

University of California Committee on Affirmative Action and Diversity. *Regents' Policy 4400: University of California Diversity Statement*. 10 May 2006.

University of California Santa Barbara. "EEMB Graduate Program." *Ecology, Evolution and Marine Biology | UC Santa Barbara*, 2020, www.eemb.ucsb.edu/academics/graduate. Accessed 29 June 2020.

University of California Santa Barbara. "About." *Ecology, Evolution and Marine Biology | UC Santa Barbara*, 2020, www.eemb.ucsb.edu/about. Accessed 29 June 2020.

University of California Santa Barbara. "Diversity, Equity, and Inclusion Consulting." *UCSB Office of the Assistant Vice Chancellor/Dean of Student Life*, 2017, studentlife.sa.ucsb.edu/equity/diversity-equity-and-inclusion-consulting. Accessed 29 June 2020.

University of California Santa Barbara. "EEMB Department." *UCSB Biology Undergraduate Program | UC Santa Barbara*, 2020, undergrad.biology.ucsb.edu/overview/eemb. Accessed 29 June 2020.

University of Michigan. "Diversity, Equity and Inclusion." *U-M LSA Ecology and Evolutionary Biology (EEB)*, 2020, lsa.umich.edu/eeb/about-us/diversity--equity-and-inclusion.html. Accessed 29 June 2020.

Appendix 6. Potential Funding Sources

The allocation of internal departmental funds lacks transparency. In addition to reallocation of existing resources to the above efforts, and more transparency regarding current allocation practices in departmental funding, we also demand that faculty and the department seek out grants specifically intended to support action items like those enumerated above. Below are some examples of available funding sources with which the department or individual faculty may apply for funding to support these initiatives.

Internal Diversity Funding	● UCSB's Faculty Outreach Grant (FOG) ● UC-HBCU Initiative

for Faculty or Department	● UC-HSI Doctoral Diversity Initiative
Extramural Diversity Funding for Faculty or Department	● NSF Inclusion Across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science (INCLUDES) Planning grant ● NSF Improving Undergraduate STEM Education: Education and Human Resources (IUSE: EHR) ● NSF Louis Stokes Alliances for Minority Participation (LSAMP) ● NSF ADVANCE: Organizational Change for Gender Equity in STEM Academic Professions ● NASA New (Early Career) Investigator Program in Earth Science ● NSF Alliance for Graduate Education and the Professoriate (AGEP) ● NSF Innovations in Graduate Education (IGE) ● NSF Division of Undergraduate Education (NSF DUE) ● NSF Division of Research and Learning (NSF DRL) ● NSF RAPID ● HHMI Inclusive Excellence ● HHMI Driving Change Grants
Private Grants	● David and Lucile Packard Foundation ● Boeing funds community based projects (ex: Seattle MESA) ● Alfred P. Sloan foundation
Example Program Initiatives	● In the School of Aquatic and Fishery Sciences at the University of Washington, the department funds a permanent diversity officer position, support for faculty training in equity and implicit bias, and a small library of books on racism, colonialism, and gender discrimination. ● Scripps Summer Undergraduate Research Fellows (SURF) program provides funding for summer undergraduate REUs, with emphasis on recruiting students from underrepresented groups. ● The UC Merced Center for Cellular and Biomolecular Machines has an NSF-funded undergraduate fellowship program that seeks to fund students from underrepresented groups: ● UCSB MRL (along with the Dow foundation) sponsors multiple programs through GSDS, including a lecture series and CSU outreach program ● UCSB AGEP HSI-Alliance pairs Hispanic/Latinx/Chicanx graduate students in STEM with faculty mentors in classrooms at CSU Channel Islands while providing pedagogical training to graduate students on inclusive teaching practices
Other Resources	● UC President's Postdoctoral Fellowship Program ● Pathway to Science ● NSF Graduate Education (DGE) Active Funding Opportunities ● Informal Science ● Pivot

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Appendix 7. Administrative Resources

Professional Advancement & Workplace Climate	Teaching for Equity & Justice	Mentoring for Inclusivity	Understanding Racism and Historical Context
❏ UCSB Diversity and Inclusion Courses ❏ UCSB Diversity, Equity, and Inclusion Consulting ❏ Audit and explore your own department environment (SERC) ❏ bystander intervention training, hosted by a variety of groups including USGS and ADVANCEGeo ❏ Ask these five questions about your program (Richards) Associated Reading List: ● Explore why "diversity" is not enough (Pitre Davis) and how emphasis on this continues to center the wrong goals (Prescod Weinstein)	❏ Center of Innovative Teaching, Research, and Learning: Inclusive teaching resources ❏ How to communicate and facilitate conversations about race (Teaching Tolerance) ❏ Structure Matters: Twenty-One Teaching Strategies to Promote Student Engagement and Cultivate Classroom Equity Associated Reading List: ● Teaching to Transgress (hooks) and other recommended resources (Univ of Chicago) ● Decolonizing Science (Prescod Weinstein) and take steps to modify your courses ● Inclusive design of courses & fieldwork (Atchison et al)	❏ Inclusive Meeting Guide (500WS) ❏ Inclusive Workplace Environments (SERC) ❏ Improve STEM climate for students with disabilities (Friedensen) ❏ Improve climate for LGBTQ+ students (500 Queer Scientists) ❏ Ten Simple Rules for Building an Anti Racist Lab (Chaudhary & Asefaw Berhe) Associated Reading List: ● Degrees of Difference: Reflections of Women of Color on Graduate School (McKee & Delgado)	❏ Concrete steps for higher education (Kurashige) ❏ Becoming Anti Racist: a presentation by STEM graduate students and faculty at UC Irvine (Dominguez, Dukes, Ivy) Associated Reading List: ● So You Want to Talk About Race (Oluo) ● White Fragility (DiAngelo) ● How to Be An Antiracist (Kendi) ● Me And White Supremacy (Saad) ● A Third University Is Possible (la paperson)

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Appendix 8. UCSB Institutional Resources

Other Campus Committees/Offices	● Academic Senate Committee on Diversity and Equity

	● Black Resource Committee ● Black Student Engagement Program ● Bren School diversity committee ● Chancellor's Advisory Committee on the Status of Women (CACSW) ● UCSB Multicultural Center
Official Initiatives/ Programs	● Early Academic Outreach Program (EAOP) ● Graduate Dean's Advisory Board on Diversity ● Graduate Scholars Program ● I ♡ UCSB - Leaders Educating and Advancing Dialogue (LEAD) ● Online Diversity, Equity, and Inclusion Education ● OSL Diversity and Inclusion Initiative ● ECoach and Eli Review
Student Organizations	● American Indian Graduate Student Alliance ● Black Graduate Student Association ● Chinese Students and Scholars Association ● Chinese Student Association ● Grad Students for Diversity in Science (GSDS) ● Society for Advancement of Chicanos and Native Americans in Science (SACNAS): ● Women in Science and Engineering
Resource Centers / Institutes Operated by the University	● African Diasporic Cultural Resource Center ● American Indian Cultural Resource Center ● Asian Resource Center ● Chicanx/Latinx Cultural Resource Center / El Centro ● Disabled Students Program ● Dream Scholars and Undocumented Students Services ● Middle Eastern Resource Center ● MultiCultural Center ● Non-Traditional Students Resource Center ● Resource Center for Sexual & Gender Diversity ● Office of International Students and Scholars ● Women, Gender, and Sexual Equity
Community Resources - Santa Barbara	● Black Lives Matter; Santa Barbara Chapter: Facebook, Instagram ● Black Lives Matter, Los Angeles Chapter: Instagram, Twitter ● Central Coast Community Advocacy Coalition ● County of Santa Barbara Commission for Women ● La Casa de la Raza ● Martin Luther King Jr. Committee of Santa Barbara ● Mixteco Indígena Community Organizing Project (MICOP) ● NAACP of Santa Barbara ● African American Women in Santa Barbara County ● People Organized for the Defense & Equal Rights of Santa Barbara Youth (PODER) ● Padres Unidos-United Parents ● Santa Barbara Community Guide to Women's Organizations
Community Resources -	

UCSB	● Counseling and Psychological Services (CAPS): 805-893-4411 (Available 24/7) ● Diversity, Equity, and Inclusion (DEI): brettcollins@ucsb.edu ● Educational Opportunity Program (EOP): EOP@sa.ucsb.edu ● Office of Black Student Development (OBSD): obsd@sa.ucsb.edu ● Resource Center for Sexual and Gender Diversity (RCSGD): rcsgd@sa.ucsb.edu ● Student Affairs - Equity and Inclusion: ennburke@ucsb.edu ● UCSB Principles of Community
STEM Resources	● Academics for Black Lives ● Black Ecologists Statement (ESA) ● National Center for Faculty Development & Diversity ● Resources for POCs in STEAM ● Shut Down STEM ● The State of Diversity in Environmental Organizations
Social Media	● #Academics4BlackLives: Twitter ● #BlackintheIvory: Twitter ● #BlackinScience: Twitter ● #BlackandSTEM: Twitter ● #BlackLivesMatter: Twitter ● @EEB_POC: Twitter

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Appendix 9. Additional Reading Resources

To equip faculty members with reading resources and a shared vocabulary we have compiled relevant articles, categorized by subject. These articles may be used for individual or group reflection.

Title	Author	Subject
White Academia: Do Better	Jasmine Roberts (Medium)	Academia and Science
Without inclusion, diversity initiatives may not be enough	Chandler Puritty et al. (Science)	Academia and Science
The context of diversity	Caio T. Laurentin (Science)	Academia and Science
Doing science while Black	Edward J. Smith (Science)	Academia and Science
Her list gives a lift to minority students in STEM	Rachel Wallach (Johns Hopkins University)	Academia and Science
Tips for easing the service burden on scientists from underrepresented groups	Neil A. Lewis, Jr. et al. (Science)	Academia and Science
Mentoring's moment	Jeffrey Mervis (Science)	Academia and Science

[Racial and gender biases plague postdoc hiring](#)	Katie Langin (Science)	Academia and Science
[Vaunted university program catches on](#)	Jeffrey Mervis (Science)	Academia and Science
[A sense of belonging matters. That's why academic culture needs to change](#)	Katie Langin (Science)	Academia and Science
[Replicating Meyerhoff for inclusive excellence in STEM](#)	Mariano R. Sto. Domingo et al. (Science)	Academia and Science
[Katharine Johnson (1918–2020)](#)	Shirley M. Malcolm (Science)	Academia and Science
[Why We Need Data for Black Lives](#)	Ashoka (Forbes)	Academia and Science
[Diversity Is Not Enough. Inclusion Is the Key.](#)	Gailda Pitre Davis (Higher Education Today)	Academia and Science
[Diversity is a Dangerous Set-up](#)	Chanda Prescod-Weinstein	Academia and Science
[Working In Science Was A Brutal Education. That's Why I Left.](#)	Brandon Taylor (Buzzfeed)	Academia and Science
[Is Science for Us? Black Students' and Parents' Views of Science and Science Careers](#)	Louise Archer et al. (Science Education)	Academia and Science
[When the academy wants you to be Black](#)	Lauren Edwards (We Rep STEM)	Academia and Science
[What Anti-racist Teachers Do Differently](#)	Pierette McKamey (The Atlantic)	Academia and Science
[What Black scientists want from colleagues and their institutions](#)	Virginia Gewin (Nature)	Academia and Science
[We're Squandering the Potential of Millions of Young People](#)	Suresh V. Garimella (Scientific American)	Academia and Science
[Cognitive Reserve and Racial Privilege in STEM](#)	Melise Edwards	Academia and Science
[African Americans in evolutionary science: where we have been, and what's next](#)	Joseph L. Graves Jr. (Evolution)	Academia and Science
[Reimagining the Pipeline: Advancing STEM Diversity, Persistence, and Success](#)	Stacy-Ann A. Allen-Ramdial and Andrew G. Campbell (Education)	Academia and Science
['I can't even enjoy this.' #BlackBirdersWeek organizer shares her struggles as a Black scientist](#)	Katie Langin (Science)	Ecology/Biology
[Minorities in Marine Biology: The Dearth of Black Professors](#)	Kevin Zelnio (Deep Sea News)	Ecology/Biology
[Eugenics on Campus](#)	Richard Tam et al. (Paul K. Longmore Institute on Disability)	Ecology/Biology
[Understanding our eugenic past to take steps towards scientific accountability](#)	Rori Rohlfs (GSA Genes to Genomes)	Ecology/Biology

[Eugenics and the ethics of statistical analysis](#)	Ido Levy (Georgetown Public Policy Review)	Ecology/Biology
[Historians expose early scientists' debt to the slave trade](#)	Sam Kean (Science)	Ecology/Biology
[Ten simple rules for building an anti-racist lab](#)	V. Bala Chaudhary and Asmeret Asefaw Berhe (EcoEvoRxiv Preprints)	Ecology/Biology
[The (literal) skeletons in the closet of American Ornithology](#)	Matthew R. Halley (personal blog)	Ecology/Biology
[Breaking barriers? Ethnicity and socioeconomic background impact on early career progression in the fields of ecology and evolution](#)	Klara M. Wanelik et al. (Ecology & Evolution)	Ecology/Biology
[A Call to Action for an Anti-Racist Science Community from Geoscientists of Color: Listen, Act, Lead](#)	Geoscientists of Color (No Time for Silence)	Science Community Call to Action
[Call to Action: Our Letter to Academics](#)	Academics for Black Lives	Science Community Call to Action
[I'm a black climate expert. Racism derails our efforts to save the planet.](#)	Ayana Johnson (Washington Post)	Conservation and Environmentalism
[Diversity and Inclusion in Conservation: A Proposal for a Marine Diversity Network](#)	Nicola S. Smith et al. (Frontiers in Marine Science)	Conservation and Environmentalism
[The Tragedy of the *Tragedy of the Commons*](#)	Matto Mildenberger (Scientific American)	Conservation and Environmentalism
[Why Every Environmentalist Should Be Anti-Racist](#)	Leah Thomas (Vogue)	Conservation and Environmentalism
[Opinion: If you care about the planet, you must dismantle white supremacy](#)	Tamara Toles O'Laughlin (Grist)	Conservation and Environmentalism
[An unequal blow](#)	Lizzie Wade (Science)	Social Contexts
[Assessing risk, automating racism](#)	Ruha Benjamin (Science)	Social Contexts
[Unearthing the reality of slavery](#)	Lizzie Wade (Science)	Social Contexts
[The bias detective](#)	Douglas Starr (Science)	Social Contexts

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