

URGE

Unlearning Racism in Geoscience

This is what was found by PennEES Pod at the Department of Earth & Environmental Sciences, University of Pennsylvania on demographic data (public and internal facing) as well as stated goals for representation, and/or proposals to collect and report demographic data.

- **Demographic data at our organization are here:**

		Totals	Percent
Speakers	2017-present	113	
	urm	11	9.73
	woman	46	40.71
	urm woman	8	7.08
Faculty	present	13	
	urm	3	23.08
	woman	5	38.46
	urm woman	1	7.69
	past	24	
	urm	0	0.00
	woman	2	8.33
	urm woman	0	0.00
	PhD Students	present	17
urm		2	11.76
woman		5	29.41
urm woman		1	5.88
past		92	
urm		6	6.52
woman		36	39.13
urm woman		3	3.26
Undergraduate EASC thesis students		2015-present	35
	urm	5	14.29
	woman	21	60.00

The speaker, faculty and PhD student identities are all on the department website and their demographics are known first-hand. The undergraduate data is not exhaustive (a subset of students who participate in the department) and is not public. The collation above that notes if the person is a woman or URM is not public accessible information and was done specifically for this deliverable. We defined URM as outlined here <https://www.top-law-schools.com/urm-applicant-faq.html>.

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- **How does your organization compare to others, or to the field as a whole?**

Comparing our department demographics to those cited in the AGI webinar (<https://youtu.be/Pm7PTFUQyuY>), we find that only our present faculty have URM employment at a rate greater than the national environmental and geoscience workforce average of ~20%. The proportion of URM in our reported undergraduate subset exceeds the national average of geoscience bachelors. For present data, women are better represented at all levels in our department than in AGU membership.

US geoscience PhD graduate data from Bernard & Cooperdock (2018) are also a useful comparison (<https://www.nature.com/articles/s41561-018-0116-6.pdf>) but we recognise the 'statistics of small numbers' issue that our department has. We see that our percentage of URM graduates is just above the national average for 1973-2016 ('Past' in the table above), and that women are slightly more underrepresented with respect to the national average in that same period.

Our department demographics, including seminar speakers, can be compared to the data presented by Kernen et al. (2021; <https://eartharxiv.org/repository/view/2060/>). Presently, women are better represented in our department at all levels than at any level within GSA, AGU or AAPG (membership, editors, awardees, etc). Unfortunately no URM society data was reported to compare against, however our department's seminar speaker URM percentage is the lowest reported aspect of present department data.

Overall, we find that our undergraduate demographics are positive relative to the national case, but the most striking and concerning demographics for our department are the past faculty. Our present faculty and recent seminar speaker demographics are a meaningful swing toward representation in-line with the overall population. This URGE deliverable was the first effort in the department to assess these statistics, however over the last 5 years the Department Chair annual report (which is internally circulated) has included partial demographic data about PhD students.

- **Public goals on demographics or increasing representation:**

In 2020 our department's 'Climate, Diversity, Equity and Inclusion Committee' (CDEIC) produced a page on the website that includes a 'Statement on Diversity, Equity and Inclusion'. Prior to this we are unaware of any specific and meaningful public goals presented by the department on demographics and representation. In the present statement, the following is written:

We will strive to improve recruitment and retention of underrepresented groups among both undergraduates and graduate students. We will focus strongly on encouraging and mentoring undergraduates through their first course in our Department, provide a supportive environment throughout their time as Earth Science or



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Environmental Studies majors and enable opportunities and financial support for basic Earth science research and for projects confronting real-life environmental issues.

For graduate students, we have suspended the GRE requirement for a trial period, conceding its potential to discriminate, pose a financial hardship, and/or discourage underrepresented applicants. We will redouble efforts to recruit members of underrepresented groups into our graduate program through connections with other colleges and universities.

To continue our learning about diversity, we will actively recruit underrepresented scientists to give research talks to our Department. We will hold biannual talks or workshops to facilitate conversations about diversity issues and help us understand how we can better identify and eliminate our own biases.

Also, in the current tenure-track faculty search the following sentences ends the job listing: "We are strongly committed to Penn's Action Plan for Faculty Diversity and Excellence, and to creating a more diverse and inclusive faculty (for more information: <https://almanac.upenn.edu/archive/volumes/v58/n02/diversityplan.html>)."

Aside from this, no measureable goals have been presented publicly, however the CDEIC has an accountability statement that will "oversee our action plan and gather data on our diversity metrics, recruitment practices, retention practices, and outcomes for promoting diversity, equity and civil discourse. The data and departmental actions will be included in the Chair's annual report to the deans and made publicly available."

- **Policy or proposed policy for collecting demographic data at your organization:**

There is no formal policy for demographic data collection at all levels in the department. We believe the Chair's Annual Report is an excellent venue for this information, as other types of data are presented there.

We believe a specific policy goal should be to understand if leaks within the PhD process disfavor URM or women: applicants to offers, offers to acceptance, acceptance to candidacy, candidacy to graduation. Presently the department does not retain records of applicant demographics. This data should be stored within the reports for posterity and included during the decadal department reviews.

Our department has recently focussed on trying to convert the freshman undergraduates who enrol in our classes for general requirements into majors, and we believe it should be policy to collect demographic data alongside this effort.

- **What did you learn about other organizations (or in general) while investigating demographic data?**



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We learned recently of this forthcoming all-male seminar series (<https://twitter.com/DrKingotheBeach/status/1366942406277554180?s=20>), a clear reminder that not all senior colleagues are trying as hard as others in 2021 to address representation in our disciplines. Hopefully the community response, and the withdrawal of a few scheduled male speakers in protest, is a indicator of change for the better.

We appreciate the link to the Lamont-Doherty Seminar Diversity Initiative page (<https://diversity.ldeo.columbia.edu/seminardiversity>) which we will attempt to include in our current department website renovations.