URGE
Unlearning Racism in Geoscience

PennState
College of Earth and Mineral Sciences | **Department of Geosciences**

Demographic Data and Goals for Penn State University, College of Earth and Mineral Sciences, and the Department of Geosciences

Demographic data for our organization - statistics and guidelines for data access:

- Staff/Student Demographics
  - Penn State: https://datadigest.psu.edu/
  - College of EMS Undergraduate: https://www.ems.psu.edu/about/who-we-are/undergraduate-enrollment
  - College of EMS Graduate: https://www.ems.psu.edu/about/who-we-are/graduate-enrollment
- Invited speaker demographics:
  - College of EMS: "The number of women invited to speak in college seminars has increased over the last several years. Gender representation among speakers generally matches and, in some venues, exceeds national availability data for disciplinary fields within EMS." *from 2017 Report on the Status of Women Academics in the College of EMS https://www.ems.psu.edu/sites/default/files/documents/faculty_staff/final-report-status-of-women-academics-in-ems-june-2017-modified-july-2017-1f6lwkq.pdf*
  - Department of Geosciences:
    - 2019/2020 speakers were 64% male, 36% female and 91% white.
    - 2020/2021 speakers were 65% male, 35% female and 65% white.
- The College of EMS has hired a data analysis consultant to work on these issues and built an internal tool for faculty and staff to explore and evaluate demographic data by unit. Some of this information is posted publicly on the EMS website in the links, above. The College is actively compiling and tracking these types of data in response to the 2019 Assessment of Living, Learning, and Working Environments (ALLWE) survey and is making the data available for groups working on implementing plans for improving the culture and climate of the College.
  - EMS Staff person charged with data collection and dissemination: Brian Bills https://www.ems.psu.edu/directory/brian-bills
  - https://www.ems.psu.edu/allwe
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- Penn State University conducted a climate survey in 2020; "dashboard" access to information (including demographic information) is available through the Office of Planning, Assessment, and Institutional Research
  - https://opair.psu.edu/community-survey/summary-findings/
  - https://opair.psu.edu/
- Note: across all levels there is tension between transparency and confidentiality. Discussion with Brian Bills (Analysis and Planning Consultant in the EMS Dean's Office) clarified that the University and EMS are genuinely pushing for more transparency but have different thresholds for confidentiality concerns. Basic demographic data is becoming more easily shared and available, but when numbers get small, the concern is that individuals become identifiable. EMS is presently working on making expanded datasets available internally to administrators, faculty and staff who have decision-making power over aspects of programs that would impact diversity and is aiming expand that circle of access as more datasets are complied. It was noted that strict demographic data is not generally as sensitive as performance-related data (e.g., GPA or salary information). The College of EMS and Penn State as a whole discuss these issues often and are working to balance the need for greater transparency with a desire to protect confidentiality.

Comparison of our Departmental and College communities relative to others:
- Graduate students (in Geoscience)
  - Underrepresented minority students represent 38% of MSc and 7% of PhD students in 2020, compared to ~10% of MSc and ~6.5% of PhD geoscience degrees awarded to underrepresented students in the U.S. in 2019 (AGI).
  - ~50/50 women/men in 2020, which is a slightly higher than the total U.S. graduate enrollment reported by AGI (~45%). Also higher than AGU membership (30% women) and AGI-reported women in environmental and geoscience workforce (~30%).
- Undergraduate students (in Geoscience)
  - 12% underrepresented minority students, compared to ~16% of undergraduate geoscience degrees awarded to underrepresented students in U.S. in 2019 (AGI)
  - 36% women in 2020, lower than U.S. graduate enrollment of ~45% (AGI).
- Postdoctoral (in EMS)
  - 9% Asian and 4% Latina/o in 2020. There are no other underrepresented groups represented. These values align fairly closely with Geoscience postdoc representation in 2016 (AGI).
  - 21% women in 2020.
- Faculty (in EMS)
  - Data were not available on the department level, only college level.

- ○ 12% underrepresented minorities in 2020.
  - ○ 27% women in 2020.
  - ○ In EMS in 2016, women represented:
    - ■ 21% of standing,
    - ■ 17% of tenured,
    - ■ 36% of pre-tenured, and
    - ■ 34% of fixed-term appointments (Status of Women Faculty in EMS Report).
    - ■
- ● Resources for comparison:
  - ○ AGI – "Diversity in the Geosciences" https://www.americangeosciences.org/geoscience-currents/diversity-geosciences https://www.americangeosciences.org/webinars/diversity-geosciences-look-data-and-actions-community
  - ○ AGI – 2016 Postdoc Diversity https://www.americangeosciences.org/sites/default/files/currents/Currents-132-DiversityinPostdocs_0.pdf
  - ○ AGU - https://www.agu.org/-/media/Files/Learn-About-AGU/2014-2019-Honors-Program-Diversity-Report.pdf

Public goals on demographics or increasing representation:
- ● Department website mission statement:
  - ○ "We achieve our mission by attracting and retaining a diverse, world-class faculty and student body, by providing a stimulating and collegial educational and research experience for undergraduate and graduate students, and by educating a broader population to make informed decisions about key environmental and resource issues." - https://www.geosc.psu.edu/about/who-we-are/mission-vision-strategic-plan
- ● Department strategic plan (not public online it seems):
  - ○ "The geosciences remain the most underrepresented for all STEM fields, and to address this challenge, we must continue to prioritize resources and efforts to diversify our faculty, staff and students. While the number of female faculty and students in the Department has risen considerably over the past few decades, faculty, staff and students of color still make up less than 10% of the Department." https://www.geosc.psu.edu/about/who-we-are/mission-vision-strategic-plan (full strategic plan not currently linked, but there is a placeholder; this presumably will be updated as final web redesign is completed; web administrators contacted to check)
  - ○ Previous strategic plan (2014-2019) provides an opportunity for comparison and assessment of progress: https://www.ems.psu.edu/sites/default/files/page/geoscstratplan2014-2019.pdf

- Suggested additional goals for your organization:
  - Geosciences Colloquium: track demographics of suggested speakers, and also speaker invitations; rate of acceptance of invitations may be higher for white males than women and people of color, so may need to ask even more to achieve a balanced lineup.
  - Review demographics with faculty once per year (undergraduate enrollment, graduate applications and admissions, graduate enrollment, student retention, faculty and staff, faculty search statistics, award recipients, alumni board members, and colloquium information)
  - Track demographic data on who receives in-house scholarships/awards (along with who applies).
  - Collect and track data on first-generation and non-traditional students.
  - Consider using more proactive targets (e.g., US population demographics) as benchmarks rather than STEM/Geosciences (e.g., AGI) benchmarks based on current Geosciences graduate/recent-graduate pools. Striving for more aggressive diversity targets internally for our searches, rather than relying on the HR threshold, might help improve the likelihood of changing our faculty demographics at a noticeable pace.

Example goals from other organizations:
  - https://diversity.ldeo.columbia.edu/seminardiversity - Increase diversity in seminars
  - https://www.nature.com/articles/d41586-019-03784-x - No all-male panels
  - http://www.ohrc.on.ca/en/policy-and-guidelines-racism-and-racial-discrimination/part-3-%E2%80%93-guidelines-implementation-monitoring-and-combating-racism-and-racial-discrimination - more information on collection of demographic data in Canada.
  - UC Davis has examples of actionable objectives:
    https://diversity.ucdavis.edu/about/strategic-plan/goals-and-objectives. In particular, their emphasis on retention (not only recruiting) of diverse populations is a nice example.