Using professional career experiences to strengthen pathways into the geoscience workforce

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Status of diversity in geoscience

- Geoscience: Earth, atmospheric, ocean sciences

- Geoscience, along with Engineering and Computer Science, is among the least diverse STEMM disciplines in people of color

- Students of color less likely than others to be exposed to geoscience as career option –few (if any) geoscience classes before college, less exposure to outdoors, and/or bad association with outdoors

- Exposure to career options early on is key

GEOPATHS at UTSA

- NSF-funded program to expose high (not highest) potential students to geoscience careers at University of Texas San Antonio (UTSA)

- 2nd year and 3rd year students – GPAs 2.2-3.0; large share of low-income, first-generation, Latinx students

- Medical rotation model: one semester research and one semester internship, plus professional development

- Importance of experiential learning, exposure to different options in geoscience

Results

- Going from having "nothing" to having rich and varied experiences
- Increased self-confidence in abilities and capacity to apply to jobs and graduate school in geoscience
- Increased knowledge about diversity within geoscience careers like oil, gas, environmental sustainability
- Apply research experiences and classroom knowledge to real life, see contributions utilized by internship employers in work settings
- Students from less selective schools feel more confident (e.g., UTSA vs. UT Austin) about seeking geoscience opportunities
- Employers value students' skills, see students' talents

Implications

- "Intentionality" to serve students in a holistic way (NASEM, 2018)
- Leveraging partnerships between academic and student affairs – tailored to the specific STEMM discipline
- Leveraging local employers' engagement
- COVID19: Virtual internships? Stress to employers the power of making these opportunities accessible to <u>all</u> students
- Economic uncertainty: even *more critical* to have exposure to wide range of options (e.g., beyond oil and gas)

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Questions?

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