Invigorating the geoscience community: Graduate student-led efforts in creating inclusive, equal and diverse science community at the University of Wisconsin-Madison

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What is GeoPath?
GeoPath is a graduate and undergraduate organization at UW-Madison. We provide a range of resources and initiatives aimed at breaking down barriers that limit the quantity and quality of equal opportunities for underrepresented minorities, ranging from community building efforts to activities focused on mentorship, to resources for easing financial stress. We believe that these barriers are detrimental to scientific research and the geoscience community.

Geoscience programs have historically lacked equitable representation of diverse groups. Recent studies suggest that earth sciences and neighboring ocean and atmospheric sciences are the least diverse in all science, technology, engineering, and math (STEM) fields (1). While the overall number of PhD degrees granted in the earth sciences has increased in the last decade, and while gender parity has been achieved in the last decade, and while gender parity has been achieved in the earth sciences, the specific representation of non-Caucasian groups has remained stagnant when compared with the proportion of the US population, with 0.9% of the 2010 National Science Foundation (NSF) graduates and 2.6% of the 2017 NSF graduates (2).

While complex barriers to entry into the earth sciences continue to persist, GeoPath and similarly targeted initiatives have had a demonstrably positive effect on opening the doors of geoscience to all people. We hope that GeoPath will serve as a model that can be incorporated into departments across the discipline.

GeoPath Initiatives: Breaking down barriers and building community

Survey Responses: Top barriers at UW-Madison Geoscience

- Lack of previous exposure to the applications of a geosciences degree
- Graduation or undergraduate requirements
- Scarcity of mentors you identify with
- Intimidated by “unspoken rules” required to navigate a degree
- Financial barriers
- Familial pressures to pursue a more “traditional” career path
- Lack of support network
- Physical experiences or kinesthetic skills
- Lack of long-term availability for field studies
- Financial barriers
- Lack of career information
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Tangible results of GeoPath’s community-building
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How 2018-2019 GeoPath participants felt after attending events — survey results

Comments from the GeoPath community:

- "It has changed the way I view the department.” - Graduate Student
- "I feel more comfortable seeking help from other members of the department. “ - Undergraduate Student
- "I feel more confident in my abilities to recognize these challenges/barriers that my peers might be facing.
- "I feel more informed about various challenges/barriers that members of the Geoscience community face.
- "I feel more prepared to apply to grad school after attending Grad School Panel.
- "I feel more comfortable/connected with graduate students in the Geoscience Department.
- "After attending this event, I feel more confident about my ability to navigate unspoken rules and to provide general applications and attending field camp guidelines, including graduate school guidelines, for future students.
- "After attending this event, I feel more interested in future GeoPath events.
- "It’s helpful to know that other people have impostor syndrome, financial concerns and academic challenges as well. I am hopeful that these discussions will continue in a department for future students, staff and faculty.” - Grad student
- "It is helpful to know that other people have impostor syndrome, financial concerns and academic challenges as well. I am hopeful that these discussions will continue in a department for future students, staff and faculty.” - Undergraduate student

References
1) Women, Minorities, and Persons with Disabilities in Science and Engineering: 2017
3) Women, Minorities, and Persons with Disabilities in Science and Engineering: 2017
4) Bernard, R.E., Cooperdock, E.H.G. No progress on diversity in 40 years. Nature
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