

## **RETENTION OF GEOSCIENCE MAJOR THROUGH PEER-MENTORING IN MATHEMATICS**

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Studies have shown that retention of students in STEM programs is strongly linked to success in math classes. For students in the geosciences, particularly those recruited from non-STEM disciplines, the typical requirement of 1-2 semesters of calculus can feel overwhelming. One year ago, with grant support from the NSF Geopath Program, the Earth and Environmental Science department at Temple University started a math-mentoring program. Students who did poorly in their previous math classes, or new students who are simply anxious about math, are paired with an upper level geoscience major. They meet at least once a week, with their mentor who provides peer coaching, including homework help, study tips, advising, and guides them to additional online and campus math resources. The mentees are required to report their homework and quiz scores to a graduate student coordinator who monitors all of the student-mentor pairs. We are developing qualitative and quantitative measure to assess whether having a mentor improves outcomes. Qualitative measures include a math anxiety survey administered at the start and end of the semester and interviews with student and their mentors. A quantitative model that will test whether mentored students exceed expectations based on predictive factors such as math SAT scores, overall GPA, math placement scores, grades in previous math classes, and course sequencing, is being developed using data drawn from the college population as a whole. Because the mentors are all volunteers, if the program is deemed a success It can be sustained beyond the grant period with just the cost of funding a part-time math mentor coordinator.