

# Work



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Anthony Wilson (right) started a petition to make the graduate record examinations optional.

## ABANDONING AN EXAM THAT FAILS

US graduate programmes are starting to drop a controversial admissions test. **By Virginia Gewin**

**U**S geoscience graduate programmes are increasingly dropping a controversial standardized test from their admissions requirements.

The graduate record examinations (GRE), introduced in 1949, aims to measure verbal and quantitative reasoning, analytical writing and critical thinking. Academic researchers and others have claimed that the test unfairly weeds out capable students and restricts the flow of women and people from minority ethnic groups into the sciences.

Geosciences departments began to eliminate it as an admissions requirement last year. The trend, dubbed GeoGRExit, has gained impetus as programmes seek to maintain application numbers in the face of the coronavirus pandemic. But the geosciences have trailed behind other disciplines. More than 300 biology and biomedical graduate programmes have dropped the test, according to a list maintained by Joshua Hall, director

of graduate admissions for the biological and biomedical sciences programme at the University of North Carolina at Chapel Hill.

Some 62 US geosciences programmes no longer require applicants to submit GRE results, according to a database maintained by Sarah Ledford, an urban hydrologist at Georgia State University in Atlanta. Around half of those have made the change since 4 June, when the American Geophysical Union's magazine *Eos* published an opinion piece calling for the test to be abandoned. It argued that eliminating the GRE could help to boost diversity in one of science's most exclusive disciplines.

### Call for change

In April, undergraduate student Anthony Wilson, who studies climate extremes at Central Michigan University in Mount Pleasant, started a petition to make the GRE optional for the 2020–21 academic year. So far, it has secured 370 signatures. Wilson has opted not

to apply to PhD programmes that continue to require the GRE. "There is a general sentiment that people of colour are not interested in going into the geosciences," says Wilson. "They are, but the programmes aren't welcoming."

Concerns are mounting that the GRE doesn't test the skills needed in science, and is biased against women and people from minority ethnic groups. Critics say it doesn't account for differences in how students are taught or how well they perform in test-taking, or for socio-economic differences that affect academic preparation, including the ability to pay for test-prep courses. A 2018 study suggested that the GRE does not predict a student's success in graduate studies (S. L. Petersen *et al.* *PLoS ONE* **13**, e0206570; 2018). And at US\$205 to sit the test, its expense can pose a burden for disadvantaged students.

### Holistic review

The department of atmospheric science at Colorado State University (CSU) in Fort Collins is one of dozens of programmes to drop the GRE in recent weeks. "I think the trend will continue," says CSU climate scientist Eric Maloney. He says that his department is refining its admissions process around 'holistic review'. Instead of basing decisions on GRE results, it will use a combination of factors, including the applicant's academic preparation, scholarly potential, self-appraisal and long-term goals.

Student-led diversity, equity and inclusion initiatives have pushed for GeoGRExit. Soil biogeochemistry PhD student Mariela Garcia Arredondo is a co-founder of the BRIDGE programme at the University of Massachusetts Amherst, which invites scientists from minority ethnic groups to share their experiences. She says that keeping the GRE requirement shows ignorance of existing inequalities, as well as injustice made worse by COVID-19's disproportionate impact on people of colour. But she hopes that programmes will continue to critically assess their metrics of admission and their methodologies to improve diversity. "The GRE isn't a stopping point for evaluating barriers to entry," she says.

Ledford agrees. She's pleased that departments are dropping the GRE, but says that institutions also need to address other barriers to diversity, such as requirements to take on unpaid internships. These tend to shut out students who cannot afford to work for free, which disproportionately affects people from minority ethnic groups. "I don't necessarily want those that dropped the GRE to pat themselves on the back," Ledford says, "and think they fixed the inequities in the system."