GEOFORCE MONTHLY

Changing lives since 2005

Teresa Gaitan with the first Class 8 truck she engineered.

ALUMNI SPOTLIGHT: TERESA GAITAN

Teresa Gaitan is a long-standing member of the GeoFORCE community. She participated in the program as a student from 2006 - 2009, then returned as a counselor from 2011 - 2015, and a trail driver from 2016 - 2019.

"GeoFORCE helped me to figure out that I wanted to be an engineer," Gaitan said. "I always enjoyed math and science, but wasn't sure what I wanted to do with it until my junior-year GeoFORCE trip, when an engineer came to talk to us about what they do and something just clicked in that moment and I just knew that I wanted to do that too."

Gaitan earned her Bachelor's Degree in Mechanical and Energy Engineering from the University of North Texas in 2016. For the past two years, she's worked as a Product Release Specialist at Peterbilt Motor Company.

"My day consists mostly of drawing trucks in a 3D modeling program," Gaitan explained. "It is my job to look at the sales order for trucks and then make sure every component fits on the rails according to how the customer ordered it. It involves knowing our engineering guidelines and parameters, while still trying to keep a nice aesthetic to the truck, whether it be by making components symmetrical or keeping other components hidden. By the end of my process, I essentially have a mapping of where the holes need to be drilled in the rails."

Alongside drawing trucks, Gaitan maintains the bill of materials and double-checks sales changes as orders are processed—a task she felt well prepared for. As a GeoFORCE trail driver, Gaitan was in charge of budgeting in-field expenses such as snacks and medical supplies, and keeping track of safety logistics.

"GeoFORCE showed me and many others that there is a big world out there with many opportunities and as long as you're willing to take a chance and work hard you can achieve your goals," Gaitan said.

Photo: Teresa Gaitan

Chelsea Mackaman-Lofland at Mt. St. Helens with GFSW 11th grade students in summer 2019.

CALL TO ALUMNI

Our corporate sponsors would like to recruit the exceptional individuals who pass through the GeoFORCE program. If you are looking for a full-time or internship opportunity, please fill out this survey and submit your resume at the end. This will serve as your permission to share with our sponsoring companies. All majors and degree levels are welcome to participate.

Alumni of GeoFORCE - Job Recruitment and Resume Upload

INTERNSHIP & SCHOLARSHIP RESOURCES

- Geoscience Research Programs & Internship Opportunities for Undergrads & Recent Grads
- Scholarships for Undergraduate & Graduate Students
- Scholarships for High School Students

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Questions or comments? Email us at geoforce@jsg.utexas.edu

STAFF SPOTLIGHT: CHELSEA MACKAMAN-LOFLAND

Chelsea Mackaman-Lofland recently graduated from The University of Texas's Jackson School of Geosciences with a Ph.D. in Geology. Throughout her time at UT, Mackaman-Lofland was worked as a GeoFORCE educational coach and instructor. In the summers of 2017, 2019, and 2020, she taught GeoFORCE students about the tectonic processes that shaped both the Pacific Northwest and Central Texas.

Mackaman-Lofland received a Bachelor of Science in Earth and Space Sciences from the University of Washington in 2012. She was sponsored by Washington NASA Space Grant Consortium as an undergraduate—a program geared toward recruiting and training women and other underrepresented minorities for Earth and Space Science careers.

"Through the Space Grant program, I was able to study rock and ash deposits left by the May 18, 1980 Mt. St. Helens eruption to better understand one of the most dangerous features of explosive volcanic eruptions: the searing hot clouds of hot ash, rocks, and gas that travel down the flanks of volcanoes at 100s of miles per hour," Mackaman-Lofland said. "This research experience greatly influenced my decision to continue studying geoscience in grad school."

At UT, Mackaman-Lofland's research focused on the geologic and tectonic processes that build continent-scale mountain ranges. She examined the record of past mountain building & erosion preserved in sedimentary basins. This led her to her current position as a Postdoctoral Fellow at the University of Connecticut, where she will study mountain building and sedimentary basin evolution in the Andes Mountains of South America.

For the next two years, Mackaman-Lofland will participate in lab and field work, mentor student research projects, and contribute to classes and experiential outreach programs at the University of Connecticut. She hopes this position will lead to an eventual career as a geoscience professor and plans to continue working with GeoFORCE as a summer instructor when her research schedule allows it.

"The 11th and 12th Grade Academies have been some of the most impactful teaching, teacher-training, and community building experiences that I've had, at UT and beyond," Mackaman-Lofland said. "The field trips offer spectacular opportunities to explore planetary features and interact with the vast scales of space and time over which geological processes occur, and I am continually learning from the students, staff, and each GeoFORCE experience."