

Diana Velazquez

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EDUCATION

Bachelor of Science, Environmental Science

Expected June 2021

Chemistry Minor and Institute of Sustainability & Energy (ISEN) Certificate

Northwestern University

EXPERIENCE

Harvard E3 REU Research Fellow

June 2020 – August 2020

Harvard University – Department of Earth and Planetary Sciences, Cambridge, MA

- Virtual visiting researcher in Dr. Ann Pearson's Lab through Harvard's Evolution, Ecology and Environment (E3) Research Experience for Undergraduates (REU).
- Analyzed the variety of carbon metabolisms associated with three target microorganisms across hot springs worldwide through biomass and lipid biomarker carbon isotope calculations.
- Determined the significance of environmental parameters on the variety of carbon metabolisms present in Archaea through LASSO regression in R.

Stanford SURGE Research Fellow

June 2019 – August 2019

Stanford University – School of Earth, Energy, and Environmental Science, Stanford, CA

- Visiting researcher in Dr. Kate Maher's Lab through Stanford's Summer Undergraduate Research in Geoscience and Engineering Program (SURGE).
- Conducted column experiments to investigate the persistence of uranium contamination in the floodplain of a former uranium processing mill in Riverton, Wyoming.
- Measured anion abundance of collected column porewater samples through ion chromatography (IC).

Independent Summer Researcher

June 2018 – August 2018

Northwestern University – Department of Earth and Planetary Sciences, Evanston, IL

- Investigated the mechanism of soil carbon sequestration by analyzing chemical stability and reactivity of compounds as a function of depth in Dr. Neal Blair's biogeochemistry lab.
- Generated 188 soil spectra through Diffuse Reflectance Infrared Fourier Transform (DRIFT) spectroscopy.
- Created a method in PeakFit software for the quantification of aliphatic and aromatic content using soil FTIR spectra.

Biogeochemistry Research Assistant

November 2017 – Present

Northwestern University – Department of Earth and Planetary Sciences, Evanston, IL

- Vacuum filter samples originating from the NSF Critical Zone Observatory (CZO) project.
- Weigh and record soil and sediment collections from CZO samples.
- Discuss new approaches for sediment and storm analysis during weekly lab meetings.

Research Apprentice

June 2016 – August 2016

University of Illinois at Urbana-Champaign – Department of Natural Resources and Environmental Sciences, Champaign County, IL

- Worked with a group of 4 students in the Environmental Science Team in the design of a bioswale for a local Champaign resident.
- Conducted fieldwork involving plant identification and pollinator observations.
- Created a visual of the final bioswale design using AutoCad and Photoshop.

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EXTRACURRICULAR

Student Advisory Board (SAB) for Environmental Science

September 2019 – Present

- Serve as one of three student members of the board.
- Provide insight on the strengths and weaknesses of the curriculum and coursework of Northwestern's Environmental Sciences program.
- Plan events to improve and extend networking among environmentally oriented students.

Society of Hispanic Professional Engineers Co-Outreach Chair

April 2019 – Present

- Coordinate STEM initiative programs for elementary and high school students.
- Contact professors, researchers, and venues as a part of event planning.
- Teach chemistry and biology to high school students in preparation for Chicago's Regional Science Bowl competition.

Arch Scholars Mentor

September 2018 – Present

- Organize weekly workshops for first year students regarding research opportunities, efficient study habits, and time management skills.
- Facilitate group and individual discussions with mentees regarding identity and inclusion.
- Report mentees' progress and concerns with program directors for future advising sessions.

Illuminate Mentor

February 2018 – June 2019

- Mentored high school students during their college application process.
- Attended training sessions administered by Evanston Township High School staff.
- Collaborated with peer mentors to create a helpful, friendly atmosphere for mentees.

AWARDS

Northwestern's J.G. Nolan Scholarship Recipient

December 2018

- Awarded to undergraduate students demonstrating academic achievement and financial need.

SURG Fletcher Award Finalist

September 2018

- Recognized by the Fletcher Family Foundation for outstanding research of a Northwestern Summer Undergraduate Research Grant (SURG) project.

Summer Undergraduate Research Grant

April 2018

- Awarded \$3,500 for eight weeks of full-time independent academic research.

Questbridge Finalist

October 2016

- Selected as a finalist for Questbridge's College Match, a national nonprofit program connecting low-income youth with leading colleges.

PROFESSIONAL ORGANIZATIONS

American Geophysical Union (AGU)

Society of Hispanic Professional Engineers (SHPE)

Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS)

SKILLS & QUALIFICATIONS

Language: Proficient in written and verbal Spanish