

Emma Palmer

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EDUCATION

Duke University, Pratt School of Engineering - Durham, NC - GPA 3.5/4.0

Expected May 2019

B.S.E., Environmental Engineering; Certificate, Global Development Engineering; Minor, Chemistry

- Relevant Coursework: Aquatic Geochemistry, Environmental Transport Phenomena, Environmental Toxicology, Engineering Sustainable Design, Biological Principles in Environmental Engineering, Water Resources Engineering, Thermodynamics
- Graduate Record Exam (GRE): Verbal Reasoning - 166, Quantitative Reasoning - 170, Analytical Writing - 6.0

University of New South Wales - Sydney, Australia

Fall 2017

Study Abroad, School of Civil and Environmental Engineering

- Relevant Coursework: Fluid Mechanics, Water and Atmospheric Chemistry

EXPERIENCE

Pratt Research Fellows - Student Researcher under Dr. Helen Hsu-Kim

November 2017-Present

- Joined a team of faculty, PhD, master's, and undergraduate students to investigate heavy metal exposure from ASGM tailings as a possible cause of elevated anemia rates in Madre de Dios, Peru (Summer 2018)
- Collect and analyze drinking water samples from Madre de Dios, Peru for heavy metal concentrations
- Measure the methylmercury and elemental mercury in segments of human hair samples as an approximation for time-dependent mercury exposure of populations living near ASGM sites in Madre de Dios, Peru
- Process water and soil samples for trace and methyl-mercury content using atomic absorption spectroscopy and ICP-MS
- Applied for and received an Independent Study Grant of \$400 from Duke's Undergraduate Research Support Office

Katsouleas NAE Grand Challenge Scholars - Program Participant

April 2017-Present

- Participated in research, service learning, entrepreneurship, interdisciplinary curriculum, and global experience opportunities to focus on one of the NAE's Grand Challenges for Engineering - provide access to clean water
- Developed a well-rounded perspective on water sources through laboratory work, summer projects, and collaboration with students and faculty in global health, environmental science, environmental engineering, and other fields
- E-Portfolio: <https://sites.duke.edu/emmapalmer>

Duke Engineers for International Development - Executive Board

August 2015-Present

- Re-design and maintain organization website and social media accounts (Spring 2018-Present)
- Co-led 10 students in designing and fundraising for a water distribution system in Madagascar (Fall 2016-Summer 2017)
- Travelled to Madagascar during the summer of 2017 for implementation of phase one of the water distribution system
- Worked on a 10-person student team to design a rainwater catchment and storage tank and travelled to Madagascar during the summer of 2016 to implement the system

Stanford FLI Conference - Conference Attendee

March 2018

- Engaged in dialogue regarding the experience of First-Generation and Low-Income (FLI) students in universities around the nation and the tools that institutions can provide to improve the experience of their FLI students

INVOLVEMENT

Penny Pilgram George Women's Leadership Initiative - Program Participant

April 2018-Present

- Fostered community with a group of 40 female-identifying students and faculty through monthly leadership workshops, mentorship meetings, and a final project aiming to empower women campus-wide

Chi Omega Fraternity - Internal Social Director

December 2017-Present

- Organize logistics including venues, transportation, and decorations for three events each semester to promote sisterhood
- Coordinate with other programming officers to streamline chapter calendar

Duke University Annual Fund - Student Phonathon Caller

January 2017-Present

- Maintain university-alumni relationships through direct communication of the current projects and renovations at Duke
- Collect alumni gifts in support of the university's faculty, research opportunities, and academic programs
- Train new hires on the calling format and the interface used to manage alumni gifts

Duke Academic Resource Center - Peer Tutor

February 2016-Present

- Provide additional weekly support to 4-6 students each semester struggling with Linear Algebra
- Tailor lessons and problem explanations to accommodate individual learning styles
- Synthesize new material into understandable and applicable examples

Duke Symphony Orchestra - Member, VP of Finance

August 2015-Present

- Prepare and perform repertoire for three concert cycles each semester as a member of an 80-person ensemble
- Assisted in budgeting for and facilitating post-concert receptions as VP of Finance (Spring 2018)

INTERESTS AND SKILLS

- Proficient in Matlab, Latex, Excel, AutoCad, RevIt
- Experienced with Adobe Creative Suite, Violin, and Clarinet