

Emma Helfrich

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EDUCATION

Virginia Tech, Master of Science in Civil Engineering

January 2019-May 2020

- **Current GPA:** 3.92 cumulative
- Student in the Accelerated Undergraduate-Graduate program; began graduate-level coursework January 2019
- Recipient of a full Graduate Assistantship and serving as a Graduate Teaching Assistant for the laboratory portion of the undergraduate course “Water Resources Engineering”

Virginia Tech, Bachelor of Science in Civil Engineering,

August 2015-May 2019

- **Graduation GPA:** 3.8 cumulative – *Summa Cum Laude*, 3.91 in-major
- Tau Beta Pi Engineering Honor Society, Chi Epsilon Civil Engineering Honor Society, ASCE

RELEVANT EXPERIENCE

Water Resources Engineering Intern, Dewberry Engineers, Gainesville, VA

May-August 2019

- Used software including HEC-HMS, HEC-RAS, and AutoCAD Civil3D to perform relevant engineering analysis and design for several water resources-related projects

Undergraduate Research Assistant, Virginia Tech

August 2017 – December 2018

- Partnered with Dr. Jennifer Irish at Virginia Tech as part of the Coastal Hazards research group
- Research included analyzing computer model data from the USACE’s North Atlantic Coast Comprehensive Study to identify storm surge patterns and levels created by non-landfalling hurricanes along the east coast

Summer Intern, The Woods Hole Group, Falmouth and Bourne, MA

May-August 2017 and 2018

- Performed engineering and data analysis tasks on the Coastal Sciences, Engineering, and Planning team at the coastal and environmental consulting firm
- Used MATLAB to construct a hypsometric model intended to compare current and simulated hydrologic conditions of a tidal stream and culvert system to prepare for culvert rehabilitation

UNIVERSITY INVOLVEMENT and LEADERSHIP

Alpha Omega Epsilon Professional Engineering Sorority, Virginia Tech

January 2016 – Present

- Devoted to helping female engineers grow professionally and establish relationships with other engineering students and faculty at Virginia Tech, while also promoting sisterhood and public service
- Internal Philanthropy Officer, August 2018-Present | External Philanthropy Officer, August 2017-May 2018

Hypatia Living Learning Community for Female Engineers, Virginia Tech

August 2015 – May 2016

- Established relationships with upperclassmen mentors and engineering peers while contributing to the VT and Blacksburg communities through volunteer work

TECHNICAL SKILLS

- Experienced with Microsoft Office products (Word, Excel, PowerPoint, Project)
- Proficient with computational and modeling software including ArcGIS, HEC-RAS and -HMS, VTPSUHM, StormQC, MATLAB, Python, and AutoCAD Civil 3D

UNIVERSITY HONORS and SCHOLARSHIPS

- Kenneth R. Ayers '80 Memorial Scholarship for 2018-2019
- Chesley A. Godfrey Scholarship for 2018-2019
- M. B. Massie and V. D. Elder Engineering Scholarship for 2018-2019
- William A. Caruthers Scholarship for 2017-2018
- Academic Dean’s List, and Dean’s List with Distinction

RELEVANT COURSEWORK

- Hydrology and Urban Hydrology
- Fluid Mechanics and Environmental Fluid Mechanics
- Water Resources Engineering
- Design of Hydraulic Structures
- Sustainable Systems and Land Development
- Water Resources Engineering
- Multi-variable calculus, ODE