

EDUCATION

University of Maryland, Baltimore County (UMBC) Baltimore, MD
Bachelor of Science in Chemical Engineering – Environmental Track
Expected Graduation Date: Fall 2018 GPA 3.71/4.0

EXPERIENCE

Undergraduate Research Assistant January 2016 - Present
UMBC's Blaney Laboratory Baltimore, MD

- Researching optimization methods for a phosphorous extraction process of agricultural waste to produce a solid high grade fertilizer
- Repairing and calibrates equipment to assist in data collection
- Utilizes various software and machines to preform data analysis

Process Engineering Intern May 2015 - July 2015
CF Industries Engineering Department Donaldsonville, LA

- Documented and preformed safety relief valve calculations for various unit operations
- Researched and received quotes for components to make equipment operational
- Examined and analyzed various sensors from different vessels to identify defective indicators and optimize performance

Carpenter's Assistant November 2014 - May 2015
Wartman Home Improvements Inc. Catonsville, MD

- Assisted a Master Carpenter with residential improvement projects
- Worked independently on demolition and installation projects
- Operated and repaired assortment of power and hand tools

DESIGN PROJECTS

Hydraulic Fracturing Secondary Treatment Reactor Design December 2015

- Designed a reactor to successfully reduce polyvalent cation concentrations for reverse osmosis treatment of hydraulic Fracturing fluid effluent
- Modeled reactor chemical equilibrium in MINEQL+ with pH as the primary operating parameter
- Prepared various analytical plots regarding the effectiveness of removal

Refrigerant Vapor Compression Cycle Modeling November 2015

- Designed and created an refrigerant vapor compression cycle in Aspen Plus which modeled varying equations of states and refrigerants
- Analyzed varying refrigerants in terms of safety, cost, and efficiency
- Identified the most accurate equation of state model dependent on refrigerant properties.

EXTRACURRICULARS

Engineers Without Borders, UMBC Chapter, Treasurer May 2015 - Present
American Institute of Chemical Engineers, Member August 2014 - Present

SKILLS, AWARDS AND CERTIFICATION

Microsoft Office, MATLAB, Aspen Plus, MINEQL+, Research, iPRSM, Python
American Red Cross First Aid Certified January 2015 - January 2017
TWIC Clearance January 2015 – January 2020
Dean's List Spring 2015 - Fall 2015