

Katherine Ernst

Field Engineer at Northrop Grumman Corporation

Experience

Field Engineer at Northrop Grumman Corporation

July 2016 - Present (1 month)

Mechanical Engineer - Professional Development Program at Northrop Grumman Corporation

June 2015 - July 2016 (1 year 2 months)

Teaching Assistant at Duke University

January 2015 - May 2015 (5 months)

- Guided students through 3D modeling (SolidWorks), circuitry, and report/presentation etiquette
- Supervised and assisted student projects in a machine shop
- Graded technical lab reports

President at American Society of Mechanical Engineers, Duke Chapter

April 2013 - September 2014 (1 year 6 months)

- Led executive board of ten and facilitated weekly meetings
- Worked with administrators and faculty advisor to meet department goals
- Initiated monthly general body meetings to increase membership and participation

Research and Development Intern at Newell Rubbermaid

May 2014 - August 2014 (4 months)

- Investigated field failures of electromechanical side bins using Shainin. Wrote and carried out test procedures, analyzed data, and identified Green Y of voltage to activate motor. Visited hospital with high failure rates, observed workflow, and recommended solutions.
- Modeled various assemblies for QMS records in Creo; performed model cleanup. Modeled assembly templates for production plant and created assembly drawings for work instructions; rapid prototyped templates using FDM, SLA, and die-cut machine.
- Performed validation of Lithium Ion 24V batteries for use in hospital carts. Determined that suspect batteries met safety and quality standards; compiled graphical evidence in Matlab and Excel. Presented findings and recommendation for action.
- Created a database of all casters used in division, profiled options for consolidation, and created standard testing procedure. Found over \$100,000 annually in consolidations, and up to \$600,000 annually in future productivity projects.
- Completed Quality Management System and FDA Compliance Training.

Engineering Intern at Tshulu Trust

May 2013 - August 2013 (4 months)

- Organized plans for a water purification project in rural South Africa with another student and a faculty member; obtained funding to carry out the plans through DukeEngage
- Led a group of local construction workers
- Constructed two slow sand filters: one grey water recycling system and one filter to clean water from the Mutale River for safe use
- Navigated cultural and language barriers within a group dynamic to successfully complete the project

Education

Duke University

Bachelor of Science in Engineering (BSE), Mechanical Engineering and Materials Science, 2011 - 2015

Activities and Societies: American Society of Mechanical Engineers President, Varsity Cheerleading, Duke University E-Team (Engineering Peer Advising), Pi Tau Sigma, Alpha Phi

Duke University

Certificate, Energy and the Environment, 2011 - 2015

Smartly

Katherine Ernst

Field Engineer at Northrop Grumman Corporation



[Contact Katherine on LinkedIn](#)