

# Andrew McKinney

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## *Chemical Engineer*

*Design and Development, Process and Support, Quality and Control*

## *Education*

### **University of Tennessee at Chattanooga – Chattanooga, TN**

Major: B.S. Chemical Engineering

August 2013 to December 2017

GPA: 3.367 – *Recurring Dean's List*

### **Harpeth High School – Kingston Springs, TN**

August 2009 to May 2013

GPA: 3.9 – *Recurring Honor Roll; Magna Cum Laude in the Top 10% of Class*

## *Professional Experience*

### **EHS & Engineering Intern**

January 2017 – December 2017

*BASF – Chattanooga, TN*

- Lead Six Sigma Yellow Belt Certification for DAF Flocculent Optimization project
- Reviewed, Updated, and Created EHS, Operations, and LOTO Procedures via In-Field Experience
- Assisted in closed cooling loop maintenance and improvement project (Design, P&IDs, material lists, etc.)
- Assisted in providing solutions and conducted lab work for various operational issues such as: Biocide Ghost-Batching Production Issues, Off-Spec. Color QA Correction, Concentration Colorination Spectrophotometer Calibration
- Assisted in DCS control loop checks and instrument implementation
- Developed Tank and Pressure Vessel Data Log system for site maintenance program
- Reviewed and provided developmental assistance for EHS programs pertaining to Air, Solid Waste, Water, SPCCP, Asbestos, Hearing Conservation and Global Harmonized System.
- Conducted EHS / PSM internal audit pre-audit site inspections and oversaw / facilitated environmental related programs during audit
- Oversaw and instructed various EHS jobs (i.e. Contractor Sewer Inspections and Disposal of Wastes)
- Experience in PHA, PSSR, FMEA, MOC and PSM meetings and procedures

### **Zip Line Tour Guide**

May 2015 – August 2015

*Adventure Works – Nashville, TN*

- Welcomed, instructed and guided participants on zip-line and group bonding tours
- Checked and enforced safety protocols for participants and mechanical reliability of equipment
- Conducted general maintenance work on site and equipment
- Trained new guides on a variety of methods and procedures regarding safety and communication

### **Forestry Aid**

May 2014 – August 2014

*Tennessee Department of Agriculture – Nashville, TN*

- Aided DOA employees in various manual task regarding construction, landscaping, gardening, etc.
- Directed and escorted visitors on site

## *Technical Skills*

- **Administrative Skills:** Time Management, Personal & Team Organization, Communication, Critical Thinking, Strong Work Ethic
- **Software Skills:** SAP, Red Vector, Lotus Notes, Microsoft Office Suite, MS Access, Visual Basic, ChemCAD, Solid Works, Maple18, LabVIEW, MatLab, PSpice
- **Special Skills:** General Vehicle Maintenance, Sterile Technique

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- **Equipment Experience:** Absorption Columns, Autoclaves, Bioreactors, Convection Drying Ovens, Diffusion Towers, Distillation Columns, Heat Exchangers, Incubators, Mass Spectrometers, Mass Flow Stations, NMR Machines, Pressure Vessels, UV Spectrometers, Wind Tunnels

## *Volunteer Experience*

- Founding Member & Secretary of AΦΩ Service Fraternity Petition Group – UTC
- Flood Reconstruction Volunteer – Pegram, TN
- Family Recreation Day Volunteer – Harpeth High School in Collab. with Nemark, Inc.

## *UTC Projects & Activities*

- Design of Butadiene Recovery and Purification System – In collab. with BASF Disp.
- Design and Construct Handicap Accessible Table – In collab. with Signal Centers
- Design of Cumene Production Process
- Design of Nitrogen Dioxide APC of a Nitric Acid Production Process
- Costing of Ethanol-Gasoline Purification Methods Utilizing Pre-Acquired Equipment
- Efficiency Testing for Small-Scale Hydrogen Production Methods
- Biofuel Recovery Process Research
- Cell Culture Growth and Permeability Research
- ChemE Car Research and Development Team Member & Co-Captain
- Order of The Engineer Chattanooga Chapter Member
- 2016 AIChE National Conference
- AΦΩ-Spark and Section 70 Conference – In collab. with ECU Chapter
- Intramural Soccer & Volleyball