

# Kaitlyn Lehman

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**Objective:** To gain and apply knowledge in the field of Chemical Engineering through a spring and/or summer engineering internship.  
Available January-August 2019

## Education

**Rochester Institute of Technology** Rochester, NY  
**Bachelors of Science: Chemical Engineering | Expected: May 2020**  
**GPA: 3.560**

## Courses:

Applied Thermodynamics	Heat Transfer/ Fluid Mechanics
Mass Transfer Operations	Instrumental Analysis
Analytical Techniques	Reaction Design
Multi Scale Material Science	Chemical Engineering Process Lab

## Relevant Work Experience:

- **Research and Development Intern | May 2018-August 2018**  
*NALAS Engineering Services Inc., Centerbrook CT*
  - Assisted with testing the viscosity and filterability of different formulations of a polymer complex and a solution that replicated the viscosity conditions using cheaper material. The results and a suggested path forward were relayed to the customer during weekly phone conferences. Wrote procedure to scale-up batch process involving pre-energetic materials from 100-mL to 1-L scale and ran experiment. The resulting material was used for preliminary continuous reaction testing. Assisted with screening process of using different reagents and reaction conditions to create an energetic plasticizer taking waste management, safety, and economic factors into account.
- **Research and Development Intern | August 2017-December 2017**  
*NALAS Engineering Services Inc., Centerbrook CT*
  - Worked on a series of informational PowerPoints describing the use benefits, and limitations in in-house equipment. This was demonstrated using reactions of acetic anhydride and water using the equipment. Assisted with writing procedure and running experiments for 100-mL scale optimization testing of a pre-energetic compound geared toward future scale-up and continuous process development.

## Skills:

**Software-** Microsoft Office; including Excel, CrystalClear, IControl, IControl IR, Matlab, VBA

**Hardware-** pH probes, Condenser, Melting Point Apparatus, micropipette, Viscometer, multimeter, thermocouples, gear pump, Crystal16, Corning Advanced Flow Lab Reactor, Back-Pressure Regulator, UV-Vis Spectrometer, FTIR Spectrometer, Atomic Absorption Spectrometer, Peristaltic Pump, Zaiput Membrane Separator, Small-Scale (100 mL) Pressurized Filtration Vessels, 100-mL Benchtop Rector, 1-L Reactor, Syringe Pump, Mettler Toledo Mettler Toledo ReactIR 45m, Gas Chromatographer with Flame Ionization detector

## Projects/ Labs:

**Chemical Engineering Processes Lab:** Worked in a team of three to explore the applications and equipment used for different chemical processes such as liquid-liquid extraction, fixed bed adsorption, gas chromatography, filtration, and batch reactions.

**Research Project:** Researched how to find the heat transfer coefficient for convection, formulated an experiment that can be done in a lab setting, and did pricing on needed equipment.

**Flow Cart Lab:** Created a schematic based on a simplified flow system, reassembled system based on schematic. Flow system included a micropump, metal and plastic tubing, a Coriolis flow meter, pressure gauges, and a research valve connected to house air.

**Instrumental Analysis Lab:** Worked in pairs to understand the advantages/ disadvantages and functionality of different types of analytical equipment such as NMR spectroscopy, UV-Vis Spectroscopy, and HPLC.

## Additional Work Experience:

**Barista** | August 2015-December 2016

*Beanz | Rochester Institute of Technology, Rochester NY*

**Busser** | September 2013-August 2015

*Niagara Frontier Country Club, Youngstown NY*

**Cashier** | July 2012-September 2013

*Delaware North Companies, Niagara Falls NY*