

# TYLER BARNES

CHEMICAL ENGINEERING (CO-OP) | MCMASTER UNIVERSITY  
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## HIGHLIGHTS OF QUALIFICATIONS

- Enrolled in **level 3** of the 4-year Co-op program
- Excellent **organizational** and **analytical skills** developed while working as a Laboratory Assistant
- Demonstrated strong **communication skills** as the Volunteer rep for the CHEMENG club
- Well-developed collaboration and teamwork abilities established through work experience, extracurricular activities and classroom projects

## SKILLS

### SOFTWARE SKILLS

- AutoCAD, MATLAB, PeopleSoft, Aspen Plus, Autodesk Inventor

### PROGRAMMING SKILLS

- Java, Python, C, HTML

### LAB & SAFETY SKILLS

- WHMIS Trained
- Standard First Aid
- Chemical Handling & Spills
- Technical Report Writing

## PROJECTS

### ISO-BUTANOL PLANT PROJECT

- Designed a chemical plant to separate and purify iso-butanol from a woody biomass, in order to assess the impact and feasibility of switching the fuel source from ethanol to iso-butanol

## EDUCATION

**BACHELOR OF ENGINEERING, CHEMICAL ENGINEERING**      **EXPECTED COMPLETION 2019**  
MCMASTER UNIVERSITY, HAMILTON ON

- Consistently on the Dean's Honour List from 2015 to the present

### RELEVANT COURSEWORK

- Fluid Mechanics
- Heat Transfer
- General Chemistry
- Introduction to Reactor Design
- Structural Properties of Materials
- Process Control & Design
- Intermediate Lab Skills
- Thermodynamics
- Simulation Modelling & Problem Solving

## EXPERIENCE

**LAB ASSISTANT CO-OP**      **SEPT 2017 - PRESENT**  
MAGNA INTERNATIONAL INC., BRAMPTON ON

- Performed a variety of mechanical, environmental and forensic tests according to specifications
- Prepared specimen samples for testing using various types of laboratory equipment
- Documented test results and generated lab reports
- Assisted with equipment preparation, floor plan layouts and documentation

## EXTRACURRICULAR ACTIVITIES

**VOLUNTEER REPRESENTATIVE**      **2016 - PRESENT**  
MCMASTER CHEMICAL ENGINEERING CLUB

- Organized the **Cooking for Change** event which gave volunteers and community members an opportunity to learn how to cook gourmet meals on a budget
- Sourced 4 new volunteer opportunities within the community for the year 2017
- Increased student participation in volunteering & fundraising events by **28%**

**MCMASTER MARAUDERS WRESTLING TEAM**      **2015 - PRESENT**

- Won silver medal in the 76kg weight class at the U SPORTS 2018 Championships in Sault Ste. Marie, placing the McMaster Marauders team in 7<sup>th</sup> place overall

**MCMASTER WELCOME WEEK REPRESENTATIVE**      **SEPT 2015**

- Welcomed 900+ first years to McMaster Engineering with energy and enthusiasm