



# SARAH NICHOLSON

B.Eng, Mechanical Engineering

## TEACHING ASSISTANT

## RESEARCH ASSISTANT

## GRAPHIC DESIGNER

### ABOUT ME

I am a recent mechanical engineering graduate at Ryerson University (BEng) currently working as a freelance graphic designer and research assistant. My experiences in teaching roles have developed my ability to bring emotional intelligence to leadership and teams, while also delivering accurate technical information.

My focus is on sustainable engineering practices that create success across a range of unconventional metrics.

### EDUCATION

**Bachelor of Mechanical Engineering,**  
Ryerson University  
Sept, 2013 – April, 2018

- CGPA 3.67 (A-) •
- Dean's List 2014 - 2018

### TECHNICAL SKILLS

Solidworks • MATLAB • EPANET •  
Review of Engineering Drawings •  
C+ • Adobe Photoshop •  
Microsoft Office Suite • HTML

### CONTACT

[sarahnicholson.co](http://sarahnicholson.co)

[nicholsonsarah.sn@gmail.com](mailto:nicholsonsarah.sn@gmail.com)

### WORK EXPERIENCE

#### Research Assistant – Mechanical & Industrial Engineering Department

May 2018 – Present

Ryerson University

- Researching students' handling of gender differences, and inclusion in the Introduction to Engineering Design course
- Redesigning courseware, rubrics, and generating training documents

#### Freelance Graphic Designer

May, 2016 - Present

Self Employed

- Creating & managing websites for businesses
- Developing printed ads and social media marketing
- Developing logos and graphics
- Increased small business website traffic to 900+ views a week

#### Teaching Assistant - Engineering Graphical Communications, Introduction to Engineering Design

Jan, 2017 – May, 2018

Ryerson University

- Taught 4 weekly two-hour lab classes for first year University course on Solidworks, engineering drafting, human factors and design
- Marked assignments and tests
- Provided student support through weekly office hour

### RECENT PROJECTS

#### Design Engineer

Jan, 2017 – May, 2017

Ryerson University – “CNC Beyond” Thesis Project

- Delivered a working prototype of an omni-directional CNC robot
- Designed and 3D printed custom attachments, designed and manufactured other frame components, led marketing, communication and project planning
- **Won the award for best presentation in Mechanical Engineering at the Engineering Day capstone fair**
- Overall course grade of A+ (4.33 GPA)



#### Thermodynamic Engineer

Sept, 2015 – Dec, 2015

Ryerson University – Thermal Systems Design Course

- Designed a pressure vessel, heat exchanger, jacketed reactor system, and a platen press heating system
- Optimized within codes, standards and given regulations
- Created excel spreadsheets to model effects of changing variables and to arrive at an optimal solution
- Overall course grade of A+ (4.33 GPA)



**SARAH NICHOLSON**

B.Eng, Mechanical  
Engineering

## CONTACT

[sarahnicholson.co](http://sarahnicholson.co)

[nicholsonsarah.sn@gmail.com](mailto:nicholsonsarah.sn@gmail.com)

## VOLUNTEER EXPERIENCE

### Design Member

Sept, 2016 – Dec, 2017

Ryerson University, Formula Racing Team

- Worked with a team to begin the design of a hub cap cover to protect from wear and particulates
- Developed car livery designs using graphic design and Solidworks skills

### Mechanical Executive

Sept, 2014 – May, 2015

Ryerson University – Women in Engineering

- Attended biweekly meetings with other executives
- Led group discussions and facilitated extracurricular activities
- Acted as a student ambassador to conferences and open houses

### First Year Engineering Midterm Prep Tutor

Sept, 2014 – Dec, 2014

Ryerson University – Student Residence

- Volunteered as a tutor for weekly 3 hour sessions to prepare first year engineering students for their midterms
- Provided insight on all courses & solved technical problems on the spot

## AWARDS

### Canadian Congress of Applied Mechanics – Thermofluids Award

March, 2018

For demonstrating success in overall academics and specifically in thermodynamic and fluid dynamic studies.

### Michael Poczo Jr. Memorial Award

March, 2018

Recognized for academic achievement, entrepreneurial thought, drive and leadership and within community.

### RBC Student's Leading Change Winner

July, 2016

Recipient of a \$10 000 scholarship for an essay written about ways the future can be changed by including more women in STEM.

### Aileen Amber Clark Award

October, 2015

Demonstrated academic performance and a commitment to being engaged as a woman in engineering.

### Secondary School Valedictorian

June, 2013

Chosen by faculty and peers to give the graduating address for Secondary School graduation.