

Emily Lazarus

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Education

August 2015 - May 2020 · GPA: 3.7

BS in Biomedical Engineering, ROCHESTER INSTITUTE OF TECHNOLOGY

EXPECTED GRADUATION: MAY 2024

PhD in Interdisciplinary Engineering, ROCHESTER INSTITUTE OF TECHNOLOGY

Experience

Undergraduate Research Assistant, Interdisciplinary Manufacturing and Engineering Design (iMED)

August 2019 – May 2020

Investigated the effect of pore geometry on cell growth and differentiation for bone regeneration through fabrication of 3D printed cryomilled composite scaffolds. Studied scaffold material properties using Differential Scanning Calorimetry (DSC). Analyzed scaffold pore geometry and size through Scanning Electron Microscopy.

Solutions Process Development Co-op, BAUSCH + LOMB

January 2019 – August 2019

Prepared laboratory and pilot scale batches of lens care solutions in a Good Manufacturing Practice (GMP) facility. Wrote and revised protocols and technical reports for the pilot scale development of lens care solutions. Performed data analysis, Minitab, on pilot and manufacturing scale lens care solution batches. Supported manufacturing process technology scale-up and transfer to manufacturing sites.

Research & Development Engineering Co-op, WELCH ALLYN

August 2017 – January 2018

Wrote and executed design validation and verification protocols on the hardware and software of medical devices. Used Auto Hot Keys to debug hardware malfunctions on core boards of an in development vital signs monitor.

Design Engineer Co-op, LIMBFORGE

June 2017 – August 2017

Refined the design and mechanics for manufacturing of a 3D printed active transradial prosthetic device prior to user testing. Used training in biomechanics and force theory to improve grip strength and biomimicry of the prosthetic. Used 3D modeling software including Fusion360, Cura, and Meshmixer.

Skills

- MATLAB
- Minitab
- Fusion360
- ImageJ
- Differential Scanning Calorimetry
- Scanning Electron Microscopy
- Aseptic Cell Culturing
- Bio-additive manufacturing

Leadership & Involvement

Co-founder, PAMPHLETS WITH PURPOSE, 2018

Volunteer, ECUADOR, JANUARY 2017

Varsity Softball, Rochester Institute of Technology, 2015 to 2017

Team Representative, STUDENT ATHLETE ADVISORY COMMITTEE, 2015 TO 2017

Volunteer, CAMELOT FOR CHILDREN, 2013 TO 2015