

Elizabeth C. Graves
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SUMMARY

Passionate, dedicated, and innovative chemical engineering graduate seeking to leverage acquired skills and knowledge into an entry-level manufacturing process engineering position at TLD. Proven analytical, organizational, communication, and problem-solving abilities in both group and self-directed working environments.

EDUCATION

University of Connecticut **Storrs, CT**
Honors Bachelor of Science in Engineering, GPA: 3.71/4.0 August 2016 – May 2020
Major: Chemical Engineering
Minor: Biomedical Engineering

Rensselaer Polytechnic Institute **Troy, NY**
Bachelor of Science in Engineering, GPA: 3.51/4.00 August 2015 – May 2016
Major: Chemical Engineering

HONORS

- University of Connecticut Honors Scholar Spring 2020
Senior Honors Thesis: *Type I Collagen and Hyaluronic Acid-Based Hydrogels to Engineer 3D Microenvironments for Breast Cancer Research*
- *Cum laude* graduate Spring 2020
- FPSA (Food Processing Suppliers Association) Career Development Award Spring 2016

WORK EXPERIENCE

Dartmouth Endocrinology, Diabetes and Metabolism, LLC **Avon, CT**
Office Manager May 2020 – January 2022

- Allocated and maintained office budget, including oversight of all purchases, expense accounts, and invoices.
- Optimized organizational systems for payment collections, deposits, and recordkeeping.
- Established strong relationships with clients by demonstrating positive interpersonal, communication, and problem-solving skills.

The Dennis Group LLC **Springfield, MA**
Process Engineering Intern May 2019 – August 2019

- Worked closely with project managers and customers in the planning, design, and construction of food processing facilities.
- Prepared PFD's, preliminary P&ID's, equipment layouts, and utility drawings to effectively meet customer specifications.
- Organized project scope, budget, and time schedules from initial start-up through final design.
- Used AutoCAD to create process plant piping designs compliant with industry codes and standards.
- Performed necessary fieldwork to gather data, resolve inter-process issues, and provide construction support.

- Managed data acquisition and analysis to engineer 3D breast cancer tumor models.
- Assisted in developing the L-C Ligament®, designed to regenerate knee ligament tissue after ACL reconstruction surgery.
- Supervised and trained new laboratory personnel on experimental protocol and equipment usage.
- Developed standardized lab procedures to evaluate rheological, physical, and tensile properties of polymers.

PROJECT EXPERIENCE

UTC-IASE Senior Design Project*Surrogate Modeling Methods: Evaluation and Implementation***Storrs, CT**

Spring 2019

- Constructed a surrogate-modeling toolkit in Python to predict the performance of HVAC systems under various design parameters.
- Tested the accuracy of various model reduction tools, including scikit-learn, ALAMO, Eureka, and Modelica.
- Developed improved adaptive sampling methods for selecting input variables in HVAC system model.

Chemical Engineering Senior Laboratory*Initiated Chemical Vapor Deposition***Storrs, CT**

Spring 2020

- Determined the impact of process variables on the deposition of thin polymeric films using initiated chemical vapor deposition techniques.
- Used laser interferometry to compare the effect of feed flowrate, filament temperature, and substrate temperature on rate of deposition.

RELEVANT COURSEWORK

Thermodynamics I, II

Process Dynamics and Control

Heat and Mass Transfer

Process Kinetics

Polymeric Materials

Fluid Mechanics

Calculus I, II, III, IV

Engineering Analysis

Organic Chemistry I, II

Physics I, II

TECHNICAL SKILLS

- Extensive experience with Python, MATLAB, JavaScript, AutoCAD, SolidWorks, COMSOL, Microsoft Office, Windows (all versions), MAC OS X
- Advanced knowledge of HAZOP methodologies for assessing process safety

CERTIFICATIONS

- SChE: Introduction to Process Safety, Hazard Recognition, Identifying & Minimizing Process Safety Hazards, Toxicological Hazards, Chemical Reactivity Hazards, Fire Hazards
- OSHA 10-hour card

INTERESTS

- Hiking, fishing, soccer, symphony orchestra performance