

Shannya Niveyro

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EDUCATION

Hofstra University, Fred DeMatteis School of Engineering and Applied Science

Bachelor of Science in Bioengineering

Graduation: December 2022

Concentration: Biomechanics, Minor: Mathematics

Cumulative GPA: 3.1

RELEVANT EXPERIENCE

Hofstra University, Hempstead, NY

Teaching Assistant

September 2022-December 2022

- Aided the professor in the Engineering Design Lab with the administration of projects and assignments and helped the students through their designing, assembly, and testing of projects.

Stony Brook University, Stony Brook, NY

Research Assistant

May 2022-Septemer 2022

- Worked under a post-doctorate and PhD student on distinct projects to help the lab run smoother with equipment
- Projects included a microscope enclosure, CAD files for micropatterns, performing the procedure to create the micropatterns, and the drawing, prototyping, and testing of parts to clean the tips for a Fluid Atomic Force Microscopy machine using Fusion 360, laser cutting, and a CNC machine.

Springboard Incubators, Hempstead, NY

Program Coordinator

February 2022-September 2022

- Designed curriculum and taught STEM courses in topics like CAD, circuits, Arduino, etc. to students and for work force development
- Spoke with schools to make professional relationships for them to acquire our services

United Therapeutics Corporation Regenerative Medicine Lab, Research Triangle Park, NC

Biomedical Engineering Co-op

July 2021-January 2022

- Worked on a team with engineers supporting scientists in the decellularization and recellularization of pig lungs
- Learned about equipment, skills, and techniques I mastered with experience including laser cutting, 3D printing, and the assembly of my own designs made in SolidWorks
- Aided in test engineering, electrical work, and wet lab experiments
- Managed projects from design, to assembly, to testing, and finally handed off to scientists

Collegiate Science and Technology Entry Program, Hempstead, NY

Pre-Collegiate Mentor

June 2020-May 2021

- Met with high school students weekly to discuss their mental health, struggles, and worked to help them make choices to improve their overall well-being in collaboration with other mentors and supervisors

ACADEMIC PROJECTS

Vascularized Islet Organ

September-November 2020

- Designed a VIO and protocol to decellularize rat lungs to use as a scaffold to grow islet cells on and prevascularize the cells *ex vivo*; purpose of the VIO is to reimplant the cells on the lung scaffold for it produce insulin in the body and therefore possibly cure Type 1 Diabetes

Smart Insulin Patch

March-May 2019

- Researched past insulin patches and designed a longer-lasting insulin patch to treat Type 1 Diabetes
- Designed an experiment to test the improved patch and predicted the results
- Created an AutoCAD drawing for the new design with a greater surface area, longer microneedles, and an increased amount of them

SKILLS

- Proficient in SolidWorks, 3D printing (FDM, SLA, and SLS), laser cutting, mechanical skills, and troubleshooting
- Experience using a Computer Numerical Control machine, making micropatterns both digitally creating the mask in CAD, and physically by performing the procedure
- Data Analysis
- Teamwork
- Experience with techniques such as Cell Passaging, PDMS production, decellularizing tissue, DNA staining, electrical work, wet lab experiments, and test engineering
- Experience with software such as ImageJ, Matlab, AutoCAD, LabView, COMSOL, and Excel
- Taken an introductory course in Python
- Fluent in Spanish

CAMPUS INVOLVEMENT

SWE: Society of Women Engineers

September 2018-Present

- Attended the National Conference in Anaheim, California in November of 2019

BMES: Biomedical Engineering Society

November 2019-Present

CSTEP: Collegiate Science and Technology Entry Program

August 2018-Present

ΘT: Theta Tau (Professional Engineering Fraternity)

February 2020-Present

- Served as Advertisement Chair for Fall 2020
 - In charge of social media for the organization for the Spring 2021.
- New Member Educator for Fall 2022
 - Lead meetings to prepare and educate potential new members of the fraternity with the values and principles of the organization.
 - Educated and organized a 10-member pledge class through their New Member Education process and guided them professionally.