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Lauren M. McLaughlin-Kelly

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EDUCATION

University at Buffalo

Bachelor of Science: **Biomedical Engineering** August 2018 – May 2022
Pre-Med Track | GPA: 3.22/4.0 | Honors: Deans List

Masters of Arts: **Biological Sciences** Expected May 2023
Focus in Anatomy & Physiology

Engineering Study Abroad University of Technology Troyes, France Summer 2019

SKILLS & CERTIFICATIONS

Solidworks Autodesk Fusion360 3D Printing Python MATLAB Casting & Molding PCR Assay's Microsoft Suite
Basic Circuitry Cell Culturing Microscopy Research Laboratory Techniques Problem Solving Critical Thinking
Leadership Adaptability Collaboration Prototyping Communication Creativity

CERTIFICATIONS

Basic Life Support (BLS) for Healthcare Providers, American Red Cross
Electrocardiograms, Phlebotomy, and Cardiac Telemetry, St Peters Hospital
COVID-19 Contract Tracing, Johns Hopkins University
Biomedical Research Investigators, CITI Program

EXPERIENCE

Cadaver Research **University at Buffalo, NY** January 2021 – Present
- Dissected the leg and hand, focusing on the mechanics of the joints and musculoskeletal system
- Currently working on a full body dissection as well as a nervous system dissection

ER Patient Care Technician **St. Peters Hospital, NY** November 2020 – Present
- Assisted physicians in the Emergency Department with central lines, intubation, CPR/BLS, etc.
- Performed EKG's & phlebotomy on patients, and urine tests & COVID/Flu tests on patient samples
- Monitored cardiac telemetry and take the vitals of patients

Assay Development Research Intern **Lucira Health, CA** May 2022 – July 2022
- Performed guard banding to test the tolerance to variations in the elution buffer & pellet for the COVID-19 FLU A+B Test
- Utilized techniques such as PCR, fLAMP-assays, and DNA/RNA purification in a BSL2 environment under GXP

Pathology Research **University at Buffalo, NY** July 2020 – May 2021
- Assisted MD/PhD students on Piezo-1 subcellular compartmentalization in Smooth Vascular Muscle Cells
- Mimicked vascular diseases by use of Vascular Smooth Muscle Cells spheroids and Atomic Force Microscopy

PROJECTS

View Personal Website, featuring more projects, research, and information

3D Printed, Anatomically Correct Hand for Surgical Training September 2021 – Present
- Performed a cadaver hand dissection to aid in the anatomical accuracy
- Utilized Solidworks and Meshmixer to 3D print a CT of the hand, allowing it to be personalized to each patient
- One of two groups selected to present our 3D Printed Anatomically Correct Hand to the UB BME Advisory Board
- Coordinated design testing with the former Buffalo Bills Orthopedic Surgeon, fellows, and residents

Total Ankle Replacement February 2022 – May 2022
- Researched the most common reasons for a total ankle replacement to fail
- Proposed the solution of using the implant as an electrode and using ultrasound to prevent and kill infections
- Proposed the solution of using antiresorptive drugs and hydroxyapatite to prevent osteolysis

Wind Turbine & First Year Engineering Award September 2018 – December 2018
- Created the first power producing, horizonal wind turbine for UB's EAS199 seminar
- Worked in the machine shop to create curved wooden blades and a hexagonal base and top, which were patented
- Received an award for using only the materials provided, while also creating a functional horizontal turbine