

Lucas Bijan Alexis

lucasb.alexis@gmail.com | +1 (919) 633 2971 | www.linkedin.com/in/lucasbalexis

EDUCATION

Duke University, Durham, NC

Expected May 2029

GPA: 3.88/4.00

Major: Biomedical Engineering and Mechanical Engineering

Relevant Coursework: Quantitative Physiology with Biostatistical Applications, Microbiology

RELEVANT EXPERIENCE

Student Researcher, Matthew L. Becker Research Group, Duke University

September 2026 - Present

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Student Researcher, Bass Connections, Duke University

June 2026 - Present

- Designing 3D printed molds incorporating dissolvable components to create hollow organ models for robotic surgery training
- Created multi-part mold for silicone forearm model to improve training for peripheral arterial line placement

Research Assistant, Texas A&M Qatar, Doha, Qatar

June 2024-August 2024

- Investigated the effect of 3D printer parameters on part strength (tensile/compressive), dimensional accuracy, and print reliability
- Presented experimental findings and statistical analysis to the department head, informing ongoing research on the 3D printing of sustainable polymer blends
- Redesigned test geometries to improve print success rates for test prints using experimental polymer blends, accelerating graduate research

LEADERSHIP AND EXTRACURRICULAR INVOLVEMENT

Outreach Director, Med Design, Duke University

April 2026 - Present

- Contact speakers, clients, and donors for the club... (intentionally incomplete)

Engineer, Duke Engage Uganda, Duke University

June 2026 - Present

- Creating wearable devices for pregnant women in rural Uganda for early pre-eclampsia detection

Iterations Subgroup Engineer, Enable, Duke University

September 2025 - Present

- Engineered a custom prosthetic attachment using Onshape, addressing client needs and integrating into an existing attachment mechanism

CAD Team Engineer, Medication Adherence Alarm, Duke University

January 2026 - April 2026

- Designed the plastic casing for a device that reminds adults with ADHD to take their medicine, taking into account internal electrical components and the communication of necessary stimuli to the user

Design Engineer, Kawempe National Referral Hospital

August 2025 - December 2025

- Created a set of attachments to add necessary functionality to the bare child delivery beds used by our client in Uganda
- Researched the attachments that would provide the most utility and the available materials and tools to inform our design

SKILLS

Language(s): French, Spanish

Computer or Technical: Fusion360, SolidWorks, Onshape, 3D Printing, Java, Soldering

Lab or Research: ANOVA, Power Analysis, Cell Culture, PCR, Cryopreservation, Hemocytometry, Gel Electrophoresis