

## MAURICE BUKENYA

Tufts University, Medford MA, 02155 USA  
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### EDUCATION

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**Tufts University** - Medford, Massachusetts, USA Sept 2017 - May 2018

- Master of Science in Chemical Engineering

**Tufts University** - Medford, Massachusetts, USA Sept 2013 - May 2017

- Bachelor of Science in Chemical and Biological Engineering XXX: XXX/XXX
- Selected Courses: Biomaterials and Regenerative Medicine, Mass Transfer, Materials Science, Physical and Organic Chemistry, Process Dynamics and Control, Reaction Engineering, Thermodynamics

**African Leadership Academy** - Johannesburg, South Africa Sept 2010 – Jun 2012

- CIE Courses in Chemistry, Mathematics & Biology; Entrepreneurial Leadership & African Studies
- Extra-curricular Activities & Awards: Co-Director Cultural Exchange Committee (2011-2012); All-round contribution Award (Year 2012); Winner of Life Sciences Olympiad in Southern Africa (2012)

### ENGINEERING/ RESEARCH EXPERIENCE

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**Nanobiofabrication Laboratory** – *MS Thesis Researcher, Tufts University* Medford, MA May 2017 – Present

- Study opal-structured hydrogel films and their potential application in biosensing and reagent-less detection

**Nanobiofabrication Laboratory** - *Undergraduate Researcher, Tufts University* Medford, MA Nov 2015 – Jan 2017

- Researched biomolecule (protein) conjugation on polymeric hydrogel microparticles for biomedical applications
- Employed replica molding techniques to make highly monodisperse polymeric PEG particles
- Incorporated chitosan into polyethylene glycol particles to improve their chemical functionality

**National Institutes of Health (NIH)** - *Engineering Intern* Bethesda, MD Jun 2016 – Aug 2016

- Utilized microfluidic techniques to encapsulate cells and beads in droplets (Drop-seq) using PDMS chips
- Conducted photolithography to make silicon wafer templates for device chips
- Enhanced efficiency of content-based fusion and sorting of droplets using dielectrophoresis
- Presented work to research group throughout the internship and to the wider NIH community on poster day

**Infectious Diseases Institute** – *Intern* Kampala, Uganda Aug 2012 – Mar 2013

- Read HIV/AIDS research papers and wrote about the research in annual report and in 2 quarterly newsletters
- Exhibited Institute's work at 4 major health conferences to audiences of over 100 guests

**Tullov Oil** – *Information Systems Intern* Kampala, Uganda Jun 2014 – Aug 2014

- Offered first-line IT support at the main offices in Kampala and in the major field sites
- Developed a requisition tool for printer supplies using Excel Visual Basic

### LEADERSHIP EXPERIENCE

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**National Society of Black Engineers, Tufts Chapter** – *Secretary and Mentor* Medford, MA Sept 2016 – Present

- Coordinated meetings, resources and opportunities for the 30-member group
- Guided and supported lowerclassmen through the club's mentorship program

**Tufts University** – *Resident Advisor* Medford, MA Aug 2015 – Nov 2016

- Planned and implemented community building programs, and acted as a student resource for 47 residents

**Global Health Corps** – *Intern* Kampala, Uganda Mar 2013 – Aug 2013

- Developed and organized training and networking programs for Uganda-based professionals (fellows)

### SKILLS

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**Laboratory:** Mass Spectrometry, soft lithography, Spectroscopy, Spectroscopy (NMR & IR), Cell Culture

**Computer/ Programing:** Matlab/Simulink, Mathcad, VBA & MS Excel, Superpro Designer

**Language:** Luganda (fluent), German (elementary)