

Jake McBride

NCAA Division I Student-Athlete at Drexel University

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Education

Drexel University Philadelphia, PA
Bachelor of Science in Materials Science and Engineering 5 year, 3 Co-op (6 months each)
Cumulative GPA: 3.44 Anticipated Graduation: June 2024

Projects

Air Conditioning Design Research Philadelphia, PA
Researcher March - June 2020

- Spearheaded research of modern engineering techniques used in Daikin's Global Cooling Prize prototype
- Authored a technical report which outlined the impact of Daikin's R-32 refrigerant on modern air conditioning design
- Directed team meetings, created a structured schedule of deadlines, and implemented a team website

Bridge Design Philadelphia, PA
Lead Designer September - December 2019

- Modeled a Pratt truss and constructed a model bridge which achieved a load bearing weight of 68 pounds
- Directed tensile testing of hard polymers to improve accuracy of load bearing calculations to 5%
- Composed a technical report which detailed the applications of the design to real world bridge design

Metallic Contaminant Research Pennington, NJ
Independent Researcher April - May 2019

- Collected soil and prepared samples for atomic absorption spectroscopy using 15 M nitric and sulfuric acid
- Measured an over 200% increase of iron concentration per meter of proximity to the contaminant
- Identified how runoff lead to iron toxicity in the nearby plant life with experimental data and qualitative analysis
- Proposed viable and cost effective methods to rehabilitate the local ecosystem

Experience

Sea Isle City Beach Patrol Sea Isle City, NJ
Lifeguard June 2020 - Present

- Supervised beach patrons and utilized modern lifeguarding practices to ensure safety
- Worked with the public, provided timely first aid, and resolved complaints
- Oversaw implementation of CPR and Beach specific protocol during practice rescues

Tortilla Flats Avalon, NJ
Line cook/Prep cook June - September 2019

- Executed prep work in main kitchen and assisted head chef
- Maintained a clean kitchen and conformed to local and state safety and cleanliness standards

Skills

Machining/Software: Atomic Absorption Spectroscopy, MATLAB, AutoCAD, Microsoft Word, Excel, PowerPoint
Languages: Python, Java, Advanced Spanish, Conversational Catalan

Relevant Coursework

Calculus: I, II, & III	General Chemistry: I & II
Fundamentals of Materials I & II	Fundamentals of Physics: I, II, & III
Engineering Systems: Linear & Dynamic	Introduction to Thermodynamics
Organic Chemistry I	

Activities

Drexel University Varsity Swimming and Diving, *member*, Fall 2019 – Present
Drexel University Student Athlete Advisory Committee, *member*, Fall 2019 – Present
Material Advantage, *member*, Fall 2020 – Present

Honors and Awards

Founder's Scholarship, 2019 – Present
Drexel Athletics Scholarship, 2019 - Present
STAR Program Participant, Philadelphia, PA, 2019 – Present (cancelled due to COVID-19)