

Michelle Halim

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Education

Bachelor of Science in Chemical Engineering

Arizona State University, Tempe, AZ
Summa Cum Laude, Moeur Award Recipient

May 2022

GPA: 4.0

Master of Science in Chemical Engineering

Arizona State University, Tempe, AZ

Expected May 2023

GPA: N/A

Academic Projects

Team Leader, CHE 432 Alkylation of Benzene to Ethylbenzene Plant, ASU, Tempe, AZ

Fall 2021

- Directed a team of four to conceptually design an optimized ethylbenzene production plant comprised of multi-stage adiabatic reactors equipped with interstage cooling configured to improve plantwide operational costs without sacrificing ethylbenzene production quality
- Project comprised of preliminary design considerations, process flow simulation and energy integration in CHEMCAD, and economic evaluations through CAPCOST software

Team Leader, CHE 598 Exploration of Autoimmune Therapies for T1D, ASU, Tempe, AZ

Fall 2021

- Lead a team of three to brainstorm, research, and expound upon hypothetical novel treatments for type 1 diabetes (T1D) by modifying bacteria with the potential to stimulate an insulin-production response in the body, as well as vaccine treatment(s) aimed to develop antibodies to protect against the problematic cytokine believed to cause T1D

Team Leader, CHE 598 Six Sigma Catapult Project, ASU, Tempe, AZ

Spring 2022

- Applied six sigma methodology to design and evaluate the performance of a catapult
- Utilized JMP statistical software to perform a 2³ factorial design and analysis based on launch angle, projectile type, and tension
- Observed trends in data, performed root cause failure analyses, and conducted additional measurement system evaluations (MSE) as necessary to further enhance catapult accuracy

Certifications/ Leadership Experience

SACHE Certification

Spring 2021

- Completed 15 SACHE courses relating to process safety and various industry safety hazards

Graduate Research, Arizona State University, Tempe, AZ

June 2022 – Present

PI: Dr. Abhinav Acharya

- Immune Engineering; exploring succinate based nanoparticles geared toward cancer immunotherapy

Sun Devil Athletics Tutor, Arizona State University, Tempe, AZ

August 2020 – Present

- Tutor for numerous STEM subjects including various levels of math, chemistry, and physics

Undergraduate Teaching Assistant, Arizona State University, Tempe, AZ

August 2021 – May 2022

- Subjects: Heat and Mass Transfer, Chemical Engineering Lab I
- Conducted lecture in professor's absence, resolved confusion during lecture/lab and assisted with in-class example problems, lead exam review sessions

Girls Team Coach, North Valley Gymnastics, Phoenix, AZ

June 2018 – July 2020

- Cooperatively oversaw the Girls XCEL Bronze program; Effectively communicate updates to parents, ensuring their children were on track to strive during competition season

Skills

Six Sigma, Microsoft Office (e.g. Word, Excel, OneNote, PowerPoint, etc.), JMP statistical software, MATLAB, Simulink, CHEMCAD