

Jorge M. Hernandez
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Education

The University of Texas at Austin
Doctor of Science in Chemical Engineering

Expected Graduation: May 2027

Texas A&M University-Kingsville
Master of Science in Chemical Engineering

Graduation: December 2021

Texas A&M University-Kingsville
Bachelor of Science in Chemical Engineering

Graduation: August 2020

Work Experience

Nova Molecular Technologies

Senior Research Associate

Kingsville, Texas.

November 2021-July 2022

- Developed novel method of acetonitrile manufacture at laboratory scale to further develop at industrial scale.
- Developed P&ID of laboratory scale process, including pre-heating section and reactor section.
- Performed experiments to define optimal operating conditions.
- Provided biweekly update presentations to board of directors to demonstrate progress on the project.

Department of Energy

Mickey Leland Chemical Engineering Intern

Remote-Los Alamos, New Mexico.

June 2021-August 2021

- Researched novel carbon capture technologies using high efficiency gas membranes to decrease operating costs of industrial processes.
- Developed Python code to simulate a two-stage gas membrane separation process with multi-stage compression and interstage cooling.
- Conducted techno-economic analysis of process to determine carbon capture cost, decreasing costs by \$30-\$40 over conventional technologies.

Inteva Products Mexico.

Engineering Intern

Matamoros, Mexico.

June 2019-July 2019

- Conducted a research project to decrease the use of adhesive in car interiors, saving \$25,000 per year by limiting waste produced by excessive use of adhesive.
- Implemented Lean methodology to improve production of car interior components, decreasing downtime by 15%.
- Conducted risk assessment of safety guidelines for various processes to decrease incidence of accidents by 25%.
- Designed database of car interior parts in Excel to catalog product specifications for over 150 components.

Texas A&M University-Kingsville

Pathways Academic Assistance Center-Chemistry Tutor

Kingsville, Texas

September 2019-August 2021

- Spend 15 hours a week tutoring to assist students in learning material in different areas of Chemistry.
- Executed a problem-based learning approach to improve critical thinking and problem-solving skills of students.
- Conducted tutoring sessions for groups of students to increase class averages by 10%.

Leadership & Organizations

American Institute of Chemical Engineers-Kingsville

Secretary

August 2018-May 2019

- Notified students from the chemical engineering department for events organized by the association.
- Organized biweekly meetings to plan events and network with AIChE members.

Skills

- Engineering Software: ASPEN Plus, ArcGIS, Python.
- Certifications: Microsoft Suite 2007 Certification, Six Sigma-White Belt.
- Microsoft Office: Microsoft Word, Excel, PowerPoint, Outlook, SharePoint, One Note.
- Languages: Spanish (Native Speaker), English (Fluent), French (Intermediate).

Community Service

- Josefina Menchaca Elementary Tutor, Mexico.
- Vicente Guerrero Elementary Tutor, Mexico.