Alejandro Morales

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EDUCATION

University of Miami

Coral Gables, FL

Bachelor of Science in Chemical Engineering

Aug 2024 – May 2028

Relevant Coursework: Biochemical Processing, Sustainable Energy, Nanotechnology, Polymer Chemistry, Reaction Engineering, Process Design

GPA: 3.81/4.0

TECHNICAL SKILLS

Languages and Tools: MATLAB, Python, Aspen, AutoCAD, SolidWorks, ChemCAD Platforms: Chemical Simulation Software, 3D Modeling, Data Analysis Tools

PROJECTS

Sustainable Biofuel Production Process | MATLAB, Process Simulation

- Designed innovative biofuel production method from agricultural waste
- Developed process with 35% improved energy efficiency
- Conducted comprehensive economic and environmental impact analysis

Advanced Polymer Recycling Technology | Python, Chemical Engineering

- Created novel chemical process for complex polymer recycling
- Achieved 80% material recovery rate
- Developed machine learning predictive maintenance model

Nanomaterial Drug Delivery System | MATLAB, Nanotechnology

- Designed targeted drug delivery mechanism using functionalized nanoparticles
- Simulated drug release profiles and targeting efficiency
- Collaborated with biomedical research team

Research Experience

Chemical Engineering Research Assistant

Jan 2022 – May 2023

University of Miami Applied Chemistry Lab

Coral Gables, FL

- Investigated sustainable chemical processing techniques
- Conducted advanced materials characterization research
- Presented findings at national chemical engineering symposium

Work Experience

Process Engineering Intern

May 2023 – Aug 2023

Dow Chemical

Freeport, TX

- Supported development of sustainable chemical manufacturing processes
- Performed process optimization and efficiency analysis
- Assisted in environmental compliance documentation

Research Intern

Jun 2022 – Aug 2022

Miami, FL

Miami-Dade Water and Sewer Department

- Supported water treatment technology research
- Conducted water quality and filtration system analysis
- Developed recommendations for process improvements