

Erick Alexander

Adjunct Faculty

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SUMMARY

Dedicated chemical engineering professional focused on teaching foundational concepts through engaging lectures and hands-on lab sessions. Committed to creating a supportive learning environment where students can succeed. Demonstrated ability to explain complex ideas simply, fostering interest in chemical engineering while ensuring adherence to safety regulations. Experience with curriculum development enhances educational offerings, while collaboration with colleagues promotes shared goals. Keen observer of student needs, implementing strategies to improve understanding and engagement in the subject matter. Passionate about reinforcing practical applications of theory to enable real-world relevance for students.

EXPERIENCE

Teaching Assistant

University Project 📅 August 2025 - May 2026 📍 Knoxville, TN

Assisted in teaching introductory courses in chemical engineering, focusing on both theoretical frameworks and practical labs. Collaborated closely with instructors, contributing insights towards improved curriculum delivery and enhanced learning outcomes. Provided academic support tailored to individual student needs, fostering a collaborative and positive educational atmosphere.

- Delivered presentations on core chemical engineering concepts, enhancing lecture materials for better engagement.
- Coordinated laboratory sessions, validating that equipment was safe and operational for instructional use.
- Created supplemental notes and guides aimed at clarifying difficult topics for students, tailoring content to diverse learning styles.
- Partnered with faculty on projects evaluating educational methodologies, openly sharing feedback that drove course improvement.
- Facilitated group study sessions, encouraging peer learning that fostered community among students.
- Led discussions on safety procedures for lab work, embedding a culture of compliance and awareness.

Chemical Engineering Innovator

Hackathon Project 📅 April 2026 📍 Remote

Engaged in a dynamic hackathon developing innovative process optimization solutions for real-world chemical engineering challenges. Emphasized teamwork and creativity to achieve sprint goals while adapting quickly to changing requirements.

- Developed a prototype control system utilizing Python, showcasing advanced data handling and user interface capabilities.
- Presented project outcomes to distinguished judges, earning recognition for originality and effective implementation.
- Conducted extensive research identifying market viability, ensuring the practicality of project applications in industry settings.
- Collaborated with peers during iterative design sessions, highlighting core strengths like decisive feedback absorption.
- Documented detailed project workflows, enabling future accessibility and learning from experiences gained.
- Celebrated creation reflection practices ensuring growth-focused results within the competitive environment.

LEADERSHIP & AWARDS

- Dean's List, University of Tennessee, 2025
- First Place, Chemical Engineering Hackathon, 2026

EDUCATION

Master's Degree in Chemical Engineering

University of Tennessee, Knoxville 🎓 GPA: 4.0 📅 2026 📍 Knoxville, TN

Coursework: *Thermodynamics, Fluid Mechanics, Process Control, Safety Engineering*

Bachelor's Degree in Chemical Engineering

University of Tennessee, Knoxville 🎓 GPA: 3.9 📅 2025 📍 Knoxville, TN

Coursework: *Organic Chemistry, Reactor Design, Heat Transfer, Instrumentation*

CERTIFICATIONS

- OSHA Instructor Qualification 📅 2026
- Certified Chemical Engineer, Certified Engineering Technician 📅 2026

TECHNICAL SKILLS

- **Project Management Tools:** Trello, Asana, JIRA

- **Programming Languages:** Python, R, MATLAB
- **Data Analysis Tools:** Excel, SPSS, Tableau
- **Safety Standards:** OSHA Regulations, EPA Guidelines, ANSI Standards
- **Laboratory Instruments:** Spectrophotometer, Chromatograph, Oscilloscope
- **Design Software:** AutoCAD, SolidWorks, ChemCad
- **Simulation Tools:** Aspen Plus, Simul8, COMSOL Multiphysics
- **Quality Assurance Tools:** Six Sigma, Lean Practices, ISO Standards
- **Curriculum Development Frameworks:** Backward Design, Universal Design for Learning, Learning Objectives Setting
- **Collaboration Platforms:** Zoom, Microsoft Teams, Google Meet

SKILLS

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|---------------------------------------|--------------------------------------|-----------------------------------|--------------------------------------|
| • Chemical Engineering Principles | • Student Engagement | • Quality and Inspection Skills | • Process Operations Knowledge |
| • Process Control and Instrumentation | • Data Analysis | • Classroom Management Techniques | • Instrumentation Proficiency |
| • Safety Compliance (OSHA Standards) | • Industrial Equipment Understanding | • Collaboration Abilities | • Independently Fieldwork Capability |
| • Curriculum Development | • Technical Calculations Expertise | • Lab Coordination Skills | |

PROFESSIONAL AFFILIATIONS

- Member, AI in Engineering Club, University of Tennessee
- Peer Mentor, Chemical Engineering Student Association, 2025-2026

LANGUAGES

- English (Native)
- Spanish (Intermediate)

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST