# Temuujin Nisaar

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## EDUCATION

**Brigham Young University** **2022 - Expected April 2027**
B.S. Chemical Engineering| GPA: 3.23 *Provo, Utah*
**Ensign College** **2021 - 2022**
B.A. Business Analytics *Salt Lake City, Utah*

## EXPERIENCE

**Research Intern** **August 2026 - Present**
*Bioactives Research* *Cedar Hills, Utah*
- Develop Python models to compare methanol and ethanol extraction of noni leaves and extraction kinetics
- Evaluate temperature, diffusion rate, staged washes, and degradation to prioritize experimental conditions and identify data

**Hazardous Materials Team Lead** **July 2025 - Present**
*Risk Management, Brigham Young University* *Provo, Utah*
- Collect and characterize chemical, biological, and radioactive materials from 120+ labs for off-site disposal
- Assist with student training and daily work to standardize safe hazardous materials operations
- Audit chemical inventory and storage to identify discrepancies and support EPA and RCRA compliance
- Develop and modify standard operating procedures with leadership for hazardous materials handling and operational safety

**Building Care Worker** **June 2022 - January 2023**
*Conference Center, Brigham Young University* *Provo, Utah*
- Coordinated setup and logistics for 40+ events, accommodating up to 2,000 attendees
- Configured conference rooms and hall layouts daily to meet event requirements

**Testing Center Proctor** **April 2021 - January 2022**
*Ensign College* *Salt Lake City, Utah*
- Supported 50+ test-takers weekly and communicated testing guidelines through email and campus announcements

**Summer Intern** **June 2018 - July 2018**
*Petro Matad Group* *Dornod, Mongolia*
- Analyzed 185+ oil extraction data points at Tamsag-21 to support engineering evaluations

## PROJECTS

**Sparger Design & Oxygen Mass Transfer Optimization**
- Designed and evaluated a sparger for a bioreactor, achieving 112% increase in mass transfer coefficient over a standard tube design
- Used M-Star CFD and experimental data to evaluate impeller RPM effects and optimize gas-liquid mixing

**Catalytic Methanation**
- Proposed bench-scale nickel catalyst experiments and GC analysis to obtain kinetics for CSTR scale-up
- Outlined power-law kinetic modeling and pore-diffusion analysis to assess reactor scale-up feasibility

## SKILLS

**Tools:** Aspen HYSYS, Emerson DeltaV, Python (NumPy, Matplotlib, SciPy/odeint), SolidWorks, Excel, Onshape, M-Star CFD
**Safety:** JHA, HAZOP, Risk Assessment, EPA, RCRA and OSHA Compliance, NIOSH Guidance, SOP Development

## TRAINING CERTIFICATES

Hazardous Materials Ground Shipper (DOT); Hazardous Waste Determination (RCRA Subpart K)
Universal Waste Management; RCRA, Emergency Response & Incidental Spill Cleanup

## VOLUNTEER EXPERIENCE & LEADERSHIP

**Volunteer Translator** **May - September 2024**
*Provo Missionary Training Center* *Provo, Utah*
- Delivered live Mongolian interpretation to make training accessible to Mongolian-speaking participants

**AP Chemistry Tutor** **May 2024 - July 2025**
*Volunteer Tutoring* *American Fork, Utah*
- Tutored AP Chemistry with personalized lesson plans, resulting in an 11% improvement in grades

**Full-Time Volunteer Representative** **September 2018 - October 2020**
*The Church of Jesus Christ of Latter-day Saints* *Brisbane, Australia*
- Led 40+ volunteers and conducted 15+ training sessions to support daily activities and leadership