Lucille Longhurst

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EDUCATION

Bachelor of Science in Mechanical Engineering — Expected Graduation Date: May 2025
Minor in Native American Studies & Tribal Public Administration
Northern Arizona University, Flagstaff, AZ

WORK EXPERIENCE

Teaching Assistant, and Grader for ME 180- Computer Aided Design — **Fall 2023- Present**

- Assisted students in understanding fundamental concepts and techniques in SolidWorks, including sketching, part modeling, assembly design, and drawing generation.
- Offered assistance and addressed technical challenges encountered by students during design projects.

Udall Native American Congressional Intern — **May 2024-August 2024**

Office of Congresswoman Melanie Stansbury, Washington D.C

- Responsible for fielding the phone calls of constituents and provided the Congresswoman with briefs about what the phone calls were about.
- Tasked with attending certain legislative hearings and writing memos to the Congresswoman about the primary points that were discussed.

Ambassador for the Steve Sanghi College of Engineering — **September 2023- Present**

- Provided peer-to-peer perspective to prospective undergraduate students and newcomers to theSteve Sanghi College of Engineering (SCE).
- Offered a unique viewpoint as a current SCE student with diverse experiences to answer inquiries related to NAU departments, programs of study, facilities, student organizations, and engineering clubs.

Community Assistant for Indigenous Peoples Living and Learning Community — **August 2022- Present**

- Aim and contribute to dynamic programming, including cultural dinners, inclusive events, field trips, and project initiatives, fostering a sense of community within the community.
- Interpret and enforce University policies and procedures, ensuring compliance within the community. Maintained a supportive community and manage Incident Reports (IRs), work orders, and other paperwork.

PROJECT EXPERIENCE

Formula Society Automotive Engineers: Powertrain — **August 2024-Present**

- Manufactured components using a lathe and mill, machining critical parts such as spacers, collars, and exhaust tips to meet design specifications.
- Designed and implemented an ergonomically optimized paddle shifting system, ensuring ease of use, durability, and precision in gear changes during high-performance racing conditions.

The Remediation of Unexploded Ordinances on the Pueblo of Isleta — **May 2024- August 2024**

- Conducted research on Unexploded Ordnance (UXO) detection and remediation efforts in the Pueblo of Isleta, assessing safety hazards, environmental impact, and barriers to land reclamation for cultural and economic purposes.
- Analyzed the performance of airborne and ground-based UXO detection systems (aMTADS and ORAGS), identifying limitations in detection accuracy and advocating for improved cleanup strategies on tribal lands.

Volunteer Research Assistant – Liquid Crystals & Materials — **January 2024 - December 2024**

- Aided in conducting rheological experiments to analyze the flow properties of liquid crystals under varying conditions.
- Prepared liquid crystal cells with different concentrations, ensuring precision in sample preparation for optical and mechanical testing.
- Assisted in microscopy analysis, interpreting phase transitions and alignment behaviors of liquid crystal materials.

ADDITIONAL

Technical Skills: SolidWorks, ANSYS, Manufacturing Lathe and Vertical Mill, MATLAB, and Python
Languages: Fluent in English, Zuni; Conversational Advanced Proficiency in Spanish
Awards: Souder Miller Associates Native STEM Recipient, Chief Manuelito Scholarship Recipient, Udall Native American Congressional Internship Recipient, NAU President's Gold Scholarship