

William Robert Alcorn III

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Education

Northern Arizona University | Flagstaff, AZ

- B.S. Mechanical Engineering | Expected Graduation: December 2026

Experience

Design Engineer Intern | Southland Industries | Tempe, AZ | Summer 2025

- I was assigned to work on the plumbing systems of a cancer research hospital and was trusted with checking the sizing of the plumbing systems according to the municipal code.
- I was trusted to check the work done by the senior engineer to ensure that the expansion tank for the building's water heater was sized properly, further ensuring potential failure would be avoided.
- I aided in the design of the HVAC systems in a research & development building through performing heat load calculations: calculating the heat generated by the surrounding environment, occupying people, electrical systems, etc., to then determine the required delivery of chilled air.
- I participated in an intern project designed to challenge and develop my engineering design skills: I was responsible for designing the new mechanical plumbing systems within a sushi restaurant following a demolition of some existing systems and structures.
- Collaborated with a team of 4 other interns on this project, learning how to collaborate effectively with project engineers, while managing different time zones and schedules.

ASME Club Officer: Secretary | NAU | August 2024 – May 2025

- Documenting the weekly officer meetings with accurate and concise summary notes.
- Co-prepared the weekly general meetings with other officers, aiding in preparations and presentations.
- Attending other engineering clubs' meetings for future collaborations and mutual promotion.
- Worked with the engineering advising office to plan an enrollment workshop for the benefit of students.

ASME Club Officer: Escape Rooms Executive Coordinator | NAU | August 2025 – May 2026

- Project management role responsible for the coordination of the 2-semester-long escape room project.
- Collaborating with the escape room team leads to ensure that their teams have what they need to build the room structures, design the puzzles, and acquire the necessary items.
- Corresponding and negotiating with NAU departments and figures to secure necessary funding and physical spaces suitable for building purposes.

Front Desk Associate | NAU | August 2023 – May 2026

- I learned about the advising processes and systems at NAU, leading me to aid my peers in enrollment workshops to ensure they were prepared to select the correct coursework for the following semesters.

Certified SolidWorks Associate

- Proves proficiency in SolidWorks mechanical design | **Certificate ID: C-RXLZNH8SG2**

Machine Shop Training

- Gained training in machine shop safety & manual machining: vertical mill, lathe, drill press; tools, etc.

Projects

Medieval Dungeon Escape Room | NAU | August 2023 – March 2024

- 1st semester spent brainstorming potential puzzles and plots for the room with the team, followed by determining the required materials and tools, and learning the necessary skills to execute our plans.
- 2nd semester spent building, setting up, and running the rooms. I gained hands-on experience as I built puzzles and contraptions, and team experience building with others and being taught to use power tools.

Mock SAE Baja Transmission | NAU | January 2025 – May 2025

- Gained practice in technical writing through technical assignments and reports.
- Acquired gear and shaft specifications using mathematical modeling in MATLAB.
- Created the layshaft assembly with properly spaced gears, collaborating with other CAD engineer teammates to ensure that the gears on the main shaft meshed and rotated properly.
- Drafted engineering drawings of all parts and assemblies.