HAYDEN BREWER

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Education

B.S. Mechanical Engineering Technology……...…… *Exp. May 2024*
University of Maine, Orono, ME

RELEVANT COURSES

Engineering Analysis: *Statics, Strength of Materials, Thermal Science, Dynamics, Fluid Flow Technology, Design I&II, Engineering Materials*
SolidWorks: *Technical Drawing, Machine Drawing, Introduction to CAM, Computer Aided Engineering (with finite element analysis)*
Manufacturing: *Machine Tool Processing I&II, Manufacturing Technology*

EXPERIENCE

Capstone Project, University of Maine, Orono, ME……*August 2023 – May 2024*

- Designing and 3D-Printing a 17-4PH Stainless Steel Rocket Nozzle for the Center of Additive Manufacturing of Materials
- Researched material properties, fuel properties, heat transfer, printer capabilities, thrust and geometry calculations for a converging diverging rocket nozzle
- Team leader, coordinated schedules for weekly meetings with the team and advisor, bi-weekly meetings with clients, team building and testing

Set Building, Heartwood Regional Theatre, Newcastle, ME……*May – July 2023*

- Communicated and worked closely with the director to carry out his vision and goals
- Designed, coordinated construction, and problem solved all aspects of the set

Assistant Assy. Tech., Exact Dispensing Systems, Newcastle, ME……. *May – August 2022*

- Calculated speeds and feeds for lathe and mill workings
- Gathered required parts and assembled precision meter/mix dispense systems
- Leak-tested vacuum chambers
- Ran pre-programmed CNC lathe and mill, pressure-tested the machined castings, and verified part dimensions
- Disassembled, cleaned, and processed machine assemblies
- Drilled & tapped holes, fabricated parts on a lathe, bent tubing, and assembled pistons according to engineering specifications

Lab Tech, Advanced Structure & Composite Center, Orono, ME……. *January – May* 2022

- Assisted with the world's largest 3D – printer. Testing and experiencing a 100% bio based-home, along with military projects
- Sorted and kept track of inventory

PERSONAL PROJECT

Dungeon Master Chair, Black Smith Forge, Engagement Ring, many more

- Created and designed using CAD system SolidWorks
- Wood working skills included use of table and band saw, drill press, routing machine, planer, electric sanders. Forge metal walls cut with a plasma cutter
- Dungeon Master Chair design mentored by Daniel McBrearty former Imagineer