

Matthew Hoag

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Online portfolio of work: www.hoagportfolio.com

Work Experience

Engineering Intern

May 2021 to Aug 2021

Test Engineering Department

Goleta, CA

- Designed and produced testing apparatuses, using additive manufacturing and Solidworks CAD software, which were later used to facilitate verification and validation procedures.
- Tasked with drafting technical reports for verification and validation procedures of four different medical appliances.
- Assisted in performing Final Check Out (FCO) procedures for two cameras used in medical procedures.
- Worked on a team of engineers to facilitate verification and validation procedures for prototype devices both before and after production.
- Learned about the numerous stages of the R&D process and their role in the manufacturing industry.
- Released both part and assembly files for test fixtures into an Agile documentation system.

LEADERSHIP

Capstone Project: Carbon Dioxide Scrubber

Aug 2021 to May 2022

Team Lead

- Delegated tasks to team members and tracked progress against Gantt chart to keep project on schedule.
- Facilitated communication with the project sponsor and faculty advisor to determine customer needs and technical feasibility.
- Performed QFD analysis to correlate customer requirements into design requirements.
- Arranged access to machine shop where fabrication and testing of device components takes place.
- Managed budget by tracking spending and allocating for unexpected costs.
- Lead research, design, and modeling of all features involved in the filtration system.

Entrepreneurship - Received "A" for Tech Business Startup Class

Jan 2020 to May 2020

- Startup Simulation
 - Worked on a team to develop a business plan for a simulated new business venture.
 - Conducted market research and assisted in determining feasibility of potential solutions.
 - Tasked with determining market size, performing budget projections, and researching competitive solutions

Academic Projects: Step-up Gearbox Design

Aug 2019 to Dec 2019

- Worked on a team of engineers to design a step-up gearbox for a motor vehicle.
 - Utilized design equations for the shafts and gears, based on limited customer requirements.
 - Performed FEA and material analysis for the gears, shafts, and bearings.
 - Conducted research into existing bearings and gears that could be used in the design.

SKILLS

Technical Proficiencies: SolidWorks | Autodesk Inventor | Matlab | Prototyping | Python | AutoCAD | 3D Printing

Interpersonal Skills: Leadership | Teamwork | Decision Making | Problem Solving

EDUCATION

George Mason University: Volgenau School of Engineering

Fairfax, VA

B.S. Mechanical Engineering

Expected Graduation: May 2022

Overall GPA: 3.53