

AUSTEN P. METSACK

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105 Laurel Lane

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Education

Western New England University – Springfield, MA
Bachelor of Science in Mechanical Engineering - December 2020
Master of Science in Mechanical Engineering - December 2021
GPA: 3.97

Industry Experience

Volvo Group Trucks Technology – Greensboro, North Carolina Summer 2019
Mechanical Engineering Intern

- Suspension, Axles, and Steering Group
- Designed and modified using PTC Creo Parametric CAD
- Performed simulations using Finite Element Analysis within ANSYS
- Assembled full size electric trucks with the assistance of technicians

Western New England University – Springfield, Massachusetts Sept. 2017-Present
College of Engineering Teacher's Assistant

- Assisted in lessons, presentations, and grading:
 - Mechanics of Materials, Material Science, Metrology Lab, Introduction to Engineering

College of Engineering Lab Assistant

- Laser cut and 3-D printed parts for students and maintained lab appearance

Patents and Projects

Comfort IV – “Heating and Cooling Intravenous System” Spring 2018-Present

- Designed a device that heats or cools intravenous fluids on a two-person team
- Manufactured a working prototype with acrylic and thermoelectric coolers
- Used LabVIEW programming to assist with the design
- Patent Pending – Application Number 62/883,315

SAE Baja – Team Leader and Treasurer 2017-Present

- Redesigned the front A-Arm and knuckle geometry to optimize the life and reduce wear
- Determined optimized spring rate and dampening coefficient of unknown coil over shocks
- Assisted in CVT and gearbox testing and design
- Gained CNC lathe manufacturing experience with a basic G-Code knowledge

Courses

| | | | |
|---------------------------------|--------------------------|--------------|----------------------|
| Data Acquisition & Processing | Electrical Engineering I | Mechanics | Materials Science |
| Electricity and Magnetism | Differential Equations | Vibrations | Engineering Analysis |
| Design of Machine Elements | Mechanics of Materials | Statics | Thermodynamics I, II |
| Computer Aided Engineering | Fluid Mechanics | Dynamics | Calculus I, II, III |
| Applied Finite Element Analysis | Fundamentals of Flight | Mechatronics | |

Computer Skills

| | | | |
|-----------------|------------|--------------|------------|
| Arduino C++ | SolidWorks | SolidCAM | Siemens NX |
| MATLAB | LabVIEW | Visual Basic | CNC lathe |
| Creo Parametric | MS Office | | |

Honors and Awards

Tau Beta Pi Engineering Honor Society – President
Omicron Delta Kappa National Leader Honor Society
Alpha Lambda Delta Honor Society
WNEU College of Engineering Dean Advisory Board Mechanical Engineering Representative
1st SAE Baja team in the United States to compete with an E-CVT at competition (2nd in the world)
3rd place award in ASME E-Fest Individual Oral Competition
Marston Award (presented to a Senior whom demonstrates an ability to apply engineering principles in professional practices)