



AURELIA

Mechanical Design Engineer / Mechatronics Engineer

Open: March - May 2022

Location(s): Cambridge, Massachusetts (Greater Boston),
hybrid eligible from USA but in-person work will be required

Trailblazers are already building the road to space. It's time to design, build, test, and launch the space habitat infrastructure for a life worth living once we get there. Aurelia Institute is a space architecture research & development lab, education and outreach center, and policy hub dedicated to scaling humanity's presence in space.

Aurelia Institute is looking for a mechanical design / mechatronics engineer to help build a new class of space vehicles and habitats. We are a small team with big ideas that will impact the next stage of human space exploration.

Tasks:

- Design structural assemblies for meso-scale (1-500 cm sized) structures
- Analyze statics and dynamics of structures and mechanisms
- Design 3D CAD models of components and assemblies
- Make engineering drawings and work with manufacturers and vendors to procure components
- Build hardware leveraging advanced fabrication technologies including wood shop, metal shop, rapid-prototyping
- Find creative solutions to complex problems while working alongside a small team

Qualifications:

- Hands-on engineer with experience building complex electromechanical systems, and/or larger human-sized structures.
- Experience designing components for CNC machining, sheet metal, plastics, injection molding, wood fabrication techniques
- Eye for aesthetic design
- Interest/background in space-based designs and architectures
- Has built/shipped working product
- Strong skills in 3D CAD tools Solidworks, Autodesk Fusion, Onshape, etc.
- Self-directed and able to identify and accomplish high-priority tasks
- Strong communication skills and high emotional intelligence (EQ)
- Demonstrated commitment to maintaining diverse, equitable, inclusive, and accessible (DEIA) environments in their projects and teams

Bonus Points:

- Mechatronic design of robotic systems
- Experience working with microcontrollers, motor drives, closed-loop feedback
- Experience programming various control systems including: state machines, position, torque, PID control, more advanced controls
- Familiarity with electronics wiring, connectors
- Industrial design experience or sketching skills
- Architectural background
- Excited to build!

Your road to space...

Interested in applying? Shoot us a note! Send an email to hello@aureliainstitute.org with "Mechanical Design applicant" in the subject line and include your resume/CV.