



Senior or Principal Mechanical Engineer

About Uni-Systems Engineering

Uni-Systems Engineering is a premier provider of custom mechanization for iconic structures and attractions that create unforgettable experiences. We partner with engineers, architects, and construction managers to mitigate risk and deliver functionally integrated, reliable structures. Our team of mechanical, structural, and electrical engineers deliver custom, project-specific solutions to complex and unprecedented engineering challenges. With expertise spanning industries such as Aerospace, Amusement and Entertainment, Stadiums and Ballparks, Telescope Observatories, and Custom Cranes, we bring engineering excellence to every project.

Visit our website (www.uni-engineer.com) to learn more.

Job Summary

We are looking for an experienced Senior or Principal Mechanical Engineer with strong leadership skills to drive strategic growth and innovation. This individual will have the opportunity to design high-profile, operable structures, working through the entire process from concept to installation in a collaborative, multi-disciplinary environment.

In this role, you will provide engineering leadership, contribute to project design, and support various phases such as documentation, purchasing, fabrication, installation, and commissioning of mechanized structural systems. You will also guide project teams, evaluate ideas from other disciplines, and apply your analytical skills to overcome complex technical challenges and achieve project goals.

- Design of complex machinery including gearing, actuators, wheels, weldments, bearings, and related assemblies
- Contribute to development of concepts and engineering designs, producing engineering calculations as required for projects and design development of systems
- Serve as Project Engineer for various projects, overseeing all aspects of design and implementation
- Maintain regular communication with clients to ensure project objectives and expectations are met
- Develop and manage design budget and schedules, ensuring timely and cost-effective project completion
- Lead and coordinate the design team to meet project goals, deadlines and deliverables
- Participate in scheduled design reviews with contractors, architects, engineering consultants, and other project team members to ensure alignment and resolve issues
- Interface with other departments to coordinate structural systems with electrical and mechanical systems
- Provide project status updates during Project Review Meetings and other company meetings
- Coordinate with field personnel and purchasing to determine and obtain required components

- Develop prototype designs and test procedures as required by the project; supervise prototype testing and troubleshooting, write prototype test reports
- Assist in the development, implementation, and documentation of prototypes.
- Visit manufacturing/vendor sites to inspect and test components before shipping to assembly
- Drive continuous improvement by finding ways to enhance quality and performance with shop and field assembly, adjustment, functionality, aesthetics, costs, and maintenance
- Support Uni-Systems Engineering Sales & Marketing Efforts:
 - Provide technical and media support for O&M documentation, including manual reviews, technical documentation, and visual materials
 - Write articles for magazines and technical journals

Job Requirements

Minimal Requirements

- Must be a U.S. citizen or a U.S. permanent resident (current Green Card holder).
- B.S. degree in Mechanical or Aerospace Engineering from an ABET-accredited school, with 5+ years of experience for Senior level and 7+ years for Principal level
- Managed risks associated with custom designs
- Collaborated with clients' input to innovate and creatively solve multifaceted problems
- Knowledge of current codes and requirements that apply to the Mechanical Engineering discipline
- Advanced understanding of engineering software including modeling and analysis; most advantageous being SolidWorks, Solidworks Simulation, MathCAD, Ansys, GD&T
- Desire to solve mechanical problems including everything from bearings to actuator sizing with a system level focus
- Proficient at using analysis software
- Independently determines and develops approach to solutions and work under general direction
- Self-directed, results-oriented with proven ability to organize, plan, and prioritize work to meet deadlines
- Communicates effectively with management, employees, vendors, and customers
- Strong attention to detail in completing work
- Can apply sound judgment and critical thinking skills to complex projects and business challenges
- Ability to work successfully within a team, cross-functionally, and independently
- Excellent verbal and written communication skills
- Travel (domestic and foreign) during design, installation, and commissioning of projects, up to 5% of the time

Preferred Requirements

- M.S. degree from an ABET-accredited institution in Mechanical, with 3+ years of experience for Senior level and 5+ years for Principal level
- E.I.T. certification
P.E. registration
- Knowledge in motors, actuators, gearing, hydraulics
- Knowledge of fabrication techniques and machine shop experience
- Exposure to mechanical equipment/systems and/or a general aptitude to being hands-on

Benefits of Employment

- Competitive salary and growth opportunities.
- Comprehensive benefits package including medical, dental, vision, life, and disability insurance.
- 401(k) plan with above-market company matching.
- Generous Paid Time Off (PTO) and Paid Company Holidays.
- HSA and FSA options.
- A collaborative culture built on integrity, respect, innovation, value, and enterprise.

If you are passionate about solving complex engineering challenges and shaping innovative solutions, we encourage you to apply for this exciting opportunity at Uni-Systems Engineering!