Uni-Systems Engineering, PC
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Minneapolis, MN 55442

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Electrical/Controls Engineer (Level 1 or 2)

**This position requires access to export-controlled technical data subject to U.S. export control laws (including ITAR). Therefore, candidates must qualify as a U.S. person under ITAR (U.S. citizen or lawful permanent resident).*

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 a motivated Electrical Engineer who is eager to spread their wings and push the company strategically. Every project will be different, so it takes an Engineer who possesses a creative and customer-focused mindset with an internal drive to tackle any issue that comes their way to ensure a positive customer experience.

The person in this role will demonstrate effective engineering and leadership skills. They will provide input and electrical design on a project basis. They will serve as a pivotal contributor to multiple aspects of projects including planning, design, documentation, programming, purchasing, integration, testing, training, and commissioning work of electrical control systems.

This position will be responsible for designing and programming control systems involving PLCs. They will perform analytical predictions of results, provide technical solutions, and effectively communicate with the project team. Works with minimum supervision or self-directed and outcome-oriented in achieving targeted project goals.

- Contribute to concept and engineering design development of electrical control systems.
- Contribute and participate in schematic design, electrical panel design, PLC and HMI programming, implementation of Ethernet and other industrial LAN networks, field installation and project commissioning.

- Actively participate in scheduled design reviews with contractors, architects, engineering consultants, and other project team members and provide project status updates as required for Project Review and other company meetings.
- Collaborate in the development, execution and review of prototype testing and debugging of control systems of new assemblies/structures.
- Visit manufacturing/vendor sites to inspect and test components before shipping to jobsite.
- Interface with field personnel and purchasing to determine and obtain required components.
- Stay current on advanced technology in control software and hardware development, have basic electrician abilities and knowledge of codes (N.E.C., etc.).
- Provide technical expertise to support Uni-Systems Engineering Inc.'s Sales and Marketing efforts.
- Takes on responsibility of their work on the design-build, including design, production, and installation of a project.

Job Requirements

Compliance

- Must qualify as a U.S. person under ITAR due to access to export-controlled technical data.

Education

- B.S. Degree from an ABET accredited institution in Electrical Engineering, Systems Engineering, Computer Engineering is preferred, or equivalent control system design and programming skills.
- E.I.T credential or planning to take the F.E. exam.
- P.E. registration is advantageous.

Experience

- 0 or more years of applicable experience.
- Experience with PLCs, I/O, HMIs, as well as VFDs, servo drives, and other motor controllers.
- Proficiency with AutoCAD advantageous.
- Experience with control system creation of software design documentation and programing.
- Proven track record in developing and implementing standard electrical engineering practices, as well as provide detailed documentation upon project completion.
- Designed and laid out control system architecture.
- Exposed to designing for functional safety.
- Worked with clients' input to innovate and creatively solve multifaceted problems.

Knowledge

- Must be able to read and understand electrical diagrams.
- Complete understanding of industrial automation and electrical control systems.
- Must understand the characteristics of 3-phase motors and their control, both electromechanically and electronic, as well as commonly used sensors and measuring loops.
- Knowledge and fluency with Rockwell (Studio 5000) PLC programing.

- Knowledge of basic computer architecture, networking, and operating systems.
- Knowledge of the National Electrical Code.
- General knowledge of Mechanical systems.

Skills and Abilities

- A logical mind and an aptitude for problem solving is a must.
- Efficiently research, integrate, and apply new technologies in unprecedented ways with minimal oversight.
- Provide innovative solutions to difficult technical issues.
- Confidence to put forth new ideas and the humility to accept the best idea regardless of origin.
- Ability to manage time and follow scheduled completion targets for projects.
- Skillful at solving electrical design problems involving motor control and automation, automation design, load calculations, programming, and related activities.
- PLC programing skills.
- Identify technical costs and schedule impacts.
- Communicate effectively with clients, customers, or official contacts.
- Ability to work successfully within a team, cross-functionally, and independently.
- Excellent verbal and written communication skills.
- May be required to travel up to 15% of the time.

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!