MONOGRAM ORTHOPAEDICS
JOB DESCRIPTION
CONFIDENTIAL AND PROPRIETARY INFORMATION

Job Title: Sr. Mechatronics Engineer
Job Location: Austin, TX
Reports To: Sr. Manager of Hardware Development

Job Summary

Outstanding mechatronics design skills, as a Senior Mechatronics Engineer in this role, you will be responsible for the design, development, testing, and integration of advanced mechatronic systems for medical applications, including but not limited to surgical robotics, UPS, PDU's, PCBA's, firmware, wire harnesses and testing equipment. This role requires deep cross-disciplinary expertise in mechanical engineering, electronics, control systems, and embedded software. You will work closely with peers to develop designs that meet customer and system requirements and will be responsible for creation, CAD modeling, prototyping and testing your designs. You will lead design review meetings to evaluate design outputs versus requirements. You will work with suppliers and contract manufacturers to develop systems and subsystems according to Monogram specifications, you will participate in risk management activities. You will work alongside other Engineers (Mechanical, Electrical and Software) to ensure the product is safe, intuitive, and robust.

Qualifications and Work Experience Required

- B.S. degree or higher in mechanical engineering.
- 5+ years of industry experience (preferably in the medical device industry) in electro-mechanical design with proven ability to take designs from concept to production.
- Experience developing medical devices and familiar with V&V testing and 510K submission activities.
- Experience with regulated product development and working under ISO 13485 and FDA QSR.
- Demonstrated problem solving and decision analysis skills
- Working knowledge of CAD 3D modeling software, (Solid Works).
- Experience operating in a cross-functional, multi-site development environment
- Must be detail oriented with strong written, verbal, interpersonal, and organizational skills
- Experience leading or participating in risk analysis evaluation and dFMEA.
- Familiar with risk management tools and techniques
- Lead the design and development of electromechanical systems for Class I, II, or III medical devices, ensuring compliance with applicable regulatory standards (FDA, ISO 13485, IEC 60601, etc.)
- Integrate sensors, actuators, embedded systems, and control algorithms into cohesive, high-performance medical products.
- Develop prototypes, conduct feasibility studies, and perform rigorous bench and field testing to validate system performance.
- Collaborate with software, electrical, mechanical, and regulatory teams throughout the product development lifecycle.
- Identify opportunities for innovation, cost reduction, and reliability improvements in existing designs.
- Ensure all designs adhere to medical device standards and support regulatory submissions (e.g., 510(k), CE Mark).

- Proficient in control system design (PID, model-based control).
- Hands-on experience with actuators, motion control systems, and sensors.
- Familiarity with software tools such as MATLAB/Simulink, LabVIEW, or similar.
- Knowledge of PCB design and electronics troubleshooting is a plus.

Essential Duties & Responsibilities

- Develop and specify product functional requirements and testing strategies according to user needs, internal and external standards and regulatory requirements.
- Design, test and integrate components and sub-assemblies to produce the overall final product design
- Identify root causes of issues, determine potential solutions, and evaluate them against requirements
- Work closely and collaboratively with other members of the development team in a fast-paced team environment
- Collaborate with contract manufacturers, designers and product specialists to optimize designs for manufacturability
- Achieve relevant performance, time-to-market objectives, and product and project cost targets, all while achieving product quality goals
- Develop hardware according to system and subsystems requirements, create CAD 3D models and detailed engineering drawings meeting company drafting standards.