

Mechanical Design Engineer

Pay Class:

Exempt - Salary

Reports to:

Engineering Manager

Date:

10/20/25

Job Description

Summary/Objective:

Take designs from great concepts and turn them into working solutions. Utilize a solid understanding of mechanical design and knowledge of industrial automation solutions to create best in class manufacturing solutions. Design products that can become part of IPSUMM's intellectual property portfolio and help advance the state of manufacturing.

Essential Functions:

(This description is not all inclusive, other duties may be assigned):

- Excellent communication skills.
- Ability to work independently and meet project deadlines.
- Translate Customer's Requirement into Design Specification, Evaluate Design Feasibility and Provide Technical Expertise to Meet Customer's Request
- Provide quality designs using SolidWorks, including solid models, assemblies and detailed 2D drawings
- Strong understanding of systems integration using a combination of off the shelf components and fabricated components
- Perform Design Reviews internally, with customers and key stakeholders
- Create Detailed Drawings of Fabricated Parts (Material Selection, Finishes, Quantity, Etc).
- Develop, review and release Bill of Materials from small assemblies to large automation lines
- Alert Purchasing of potential issues with parts availability, and make recommendations for sourcing as applicable.
- Perform revisions on existing drawings and follow ECO procedures to document changes.
- Assist sales with customer concept generation, quote generation and sales presentations
- Identify potential high-risk areas during initial quoting process and recommend solutions
- Up to date with current best practices and leading technology as relevant to automation and manufacturing.
- Participate in Design Schedule Development and Internal Review Meetings
- Manage projects as assigned from sales to delivery with interdisciplinary teams.
- Assist assembly team with build-out, testing and conflict resolution.
- Design products that fit into IPSUMM's flexible automation philosophy, have potential to open new opportunities in industrial applications or provide new technology in the consumer and commercial sectors.

Work Environment:

- General office and manufacturing environment.

Required Education and Experience:

- Bachelor's Degree in Mechanical Engineering with 3+ years of relevant experience or equivalent combination of experience and training.
- Proficient in SolidWorks for design.
- Ability to apply GD&T
- Knowledge of basic part fabrication and machining techniques
- Experience with automated equipment used in manufacturing.

Preferred Education and Experience:

- Knowledge of electrical components used in equipment (power supply, motor drives, sensor types and other components commonly used in machine building)
- Basic understanding of PLC programming.
- Lean manufacturing principles.