

# **Role Description**

## **Design Engineer**



**Summary** The Design Engineer is responsible for carrying out the duties of the Engineering department, including design, research, prototyping, engineering documentation, estimating and process improvement.

**Essential Duties and Responsibilities** include the following. Other duties may be assigned.

- Use specialized software to create models and drawings of products
- Research new materials and methods of development
- Organize and maintain existing engineering records
- Construct prototypes and confirm designs with design/purchasing team
- Perform physical testing on engineering prototypes
- Ensure components and assemblies adhere to applicable industry and business standards
- SME (Subject Matter Expert) on Routers and Plasma Cutters

**Standard Work** includes the following.

- To be Completed on a Daily Basis
  - Review Production Schedule with Fabrication Coach/Lead, assign new work to CNC Operators, record status and collect production data from CNC Router and Plasma Cutting Operations.
  - Conduct Quality Audits on at least one active work order in CNC, ensuring written instructions are followed by CNC Personnel.
  - Perform Shop Safety Checks; including safety rule adherence, proper PPE, and OSHA required obligations applied to all CNC Personnel.
  - Ensure that CNC daily checks are completed, including controls, wire rope and upper/lower limit switch operation.
- To be Completed on a Weekly Basis
  - Each Monday, ensure that weekly inventory is conducted and results documented and procurement is notified.
  - Each Tuesday, audit metal storage/organization, Field-Day/Cleanup and CNC Equipment maintenance checks are completed and documented.

# **Role Description**

## **Design Engineer**



- To be Completed on a Monthly Basis
  - On the First Monday of each Month, Ensure that Operator(s) Field-Day CNC Machines and Metal Racks and perform a complete Tool Maintenance Check. (Order spare parts as needed)
  - On the Second Tuesday of each Month, Audit One CNC project. Ensure that the CNC Operator is present during the audit and share findings/learnings.

### **Leadership Responsibilities**

Directly leads 2-4 non-supervisory employees. Perform leadership responsibilities in accordance with the organization's policies and applicable local, state and federal law. Responsibilities include training employees; planning, assigning, and directing work; appraising performance; rewarding and disciplining employees; addressing complaints and resolving problems.

### **Qualifications**

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required.

- Working knowledge of effective practices and techniques including the ability to lead, instruct and coordinate the work of a small group or crew of skilled and semi-skilled operators.
- Ability to accurately estimate and prepare supplies and materials needed for jobs.
- Ability to ensure work is performed in sequence.
- Working knowledge of the methods, materials, tools and equipment used in the fabrication trade as well as knowledge of applicable state and federal building and safety codes and regulations.
- Working knowledge of or ability to quickly learn sign fabrication business infrastructure, policies and procedures.
- Bachelor's Degree in Industrial Design, Mechanical Engineering or equivalent
- 3+ years' experience in mechanical design
- In-depth knowledge of Flexi and other 3D CAD software as required
- Extensive knowledge of metal fabrication processes
- Understanding of current cutting tool technology
- Impeccable attention to detail
- Ability to plan, schedule, coordinate and problem solve effectively
- Ability to effectively and accurately maintain records, retrieve data and prepare standard reports using manual and/or computerized record-keeping systems.
- Demonstrated ability to read, interpret, and work from blueprints, plans, drawings and specifications, and make rough sketches.

## **Role Description Design Engineer**



- Excellent computer skills and proficiency with a variety of computer applications including word-processing, spreadsheets, databases, online systems, and internet as well as online calendaring and email.
- Demonstrated ability to maintain a high degree of confidentiality.
- Thorough knowledge of English grammar, spelling and punctuation and the ability to read, write and perform arithmetic functions at a level appropriate to the position.
- Ability to interact and communicate in an effective and dependable manner, as well as establish and maintain cooperative working relationships with clientele such as students, staff, faculty and co-workers.
- Demonstrated ability to use tact and diplomacy to effectively handle a broad range of high level and sensitive interpersonal situations with diverse personalities, and to respond appropriately to conflicts and problems.

### **o Special Conditions:**

- § Ability to work around equipment and climb stairs, squat, kneel and sit for long periods.
- § Ability to manipulate parts and tools of the CNC Equipment trade safely.
- § Ability to distinguish color and depth.

### **Education and/or Experience**

Bachelor's Degree in Design, Mechanical Engineering or equivalent. At least Two (2) years of engineering drafting or equivalent. Experience in miscellaneous steel and aluminum coatings is a must. This includes stairs, handrails, ladders, and catwalks.

### **Language Skills**

Ability to read and interpret documents such as safety rules, operating plans, and procedure manuals. Ability to write reports and the ability to speak effectively before groups of customers or employees of organization.

### **Computer Skills**

CAD, AutoCAD, Enroute and Flexi software is a must. Other pertinent computer software such as email, document software, etc. is also required.

### **Certificates, Licenses, Registrations**

Local CNC Certification required, CAD/AutoCAD Certificate is desirable. .

### **Physical Demands**

## **Role Description**

### **Design Engineer**



The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is frequently required to stand; walk; sit; use hands to finger, handle, or feel; reach with hands and arms and talk or hear. The employee is occasionally required to sit for long periods; climb or balance; stoop, kneel, crouch, or crawl and taste or smell. The employee must frequently lift and/or move up to 10 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception and ability to adjust focus.

### **Work Environment**

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this Job, the employee is frequently exposed to moving mechanical parts and fumes or airborne particles. The employee is frequently exposed to vibration. Long periods of sitting are essential. The employee is occasionally exposed to wet and/or humid conditions. The noise level in the work environment is usually moderate.