



**Code: 6605**  
Family: Construction, Maintenance, and Skilled Labor  
Service: Operation and Construction  
Group: Industrial Trades  
Series: Metal Working Trades

---

## **CLASS TITLE: BLACKSMITH**

### **CHARACTERISTICS OF THE CLASS**

Under supervision, performs skilled blacksmith work in forging, shaping, and bending metals to fabricate metal parts for use in the repair and maintenance of equipment, and performs related duties as required

### **ESSENTIAL DUTIES**

- Reads blueprints and work orders to assess work required and to determine the type and size of parts to be shaped, the type of metals to be used and other requirements;
- Removes worn and damaged parts on equipment using plasma cutters or burning torches;
- Ensures adequate supplies of tools, equipment and materials are at work site to complete jobs;
- Heats metal to proper temperature in a blacksmith's forge or furnace and uses hand and power tools to hammer, punch or cut metal to size and shape on an anvil;
- Uses a variety of welding methods including electric arc, MIG and TIG welding or oxy-acetylene welding to join parts;
- Fabricates metal parts and frames for use on fire trucks and firefighting apparatus, tow-trucks and other heavy duty vehicles and equipment;
- Checks part sizes using measuring instruments;
- Fabricates customized tools for use in the installation, replacement and repair of brackets, bars, wrenches, frames and other metal parts;
- Prepares work activity reports;
- Cleans and maintains forge and furnace, blacksmith tools and related equipment;
- Cleans work sites after repairs

**NOTE:** *The list of essential duties is not intended to be inclusive; there may be other duties that are essential to particular positions within the class.*

### **MINIMUM QUALIFICATIONS**

#### **Education, Training, and Experience**

- Successful completion of a US Department of Labor registered blacksmith apprenticeship training program and journeyman status; or an equivalent combination of education, training, and experience

#### **Licensure, Certification, or Other Qualifications**

- A valid State of Illinois driver's license is required

### **WORKING CONDITIONS**

- Exposure to loud noise, fumes or dust
- Exposure to extreme temperatures
- Exposure to hazardous conditions (e.g., heavy machinery)

## **EQUIPMENT**

- Personal protective equipment (e.g., hard hat, shoes, glasses, gloves)
- Safety devices or equipment (e.g., cones, barricades, metal plates)
- Standard tools and equipment of the blacksmith trade (e.g., anvil, vise, hammers)
- Measuring tools

## **PHYSICAL REQUIREMENTS**

- Substantial lifting (up to 50 pounds) is required
- Ability to stand and walk for extended or continuous periods of time
- Ability to quickly bend, stretch, twist, or reach out with one's body, arms, and/or legs
- Ability to climb staircases, ladders, and/or step stools
- Ability to operate applicable hand tools, power tools, and equipment

## **KNOWLEDGE, SKILLS, ABILITIES, AND OTHER WORK REQUIREMENTS**

### **Knowledge**

Moderate knowledge of:

- \*equipment, tools, and materials specific to the blacksmith trade
- \*applicable safety and code standards specific to the blacksmith trade, including OSHA standards
- \*use of safety equipment and protective gear

Some knowledge of:

- \*repair, maintenance, and preventative maintenance methods, practices, and procedures applicable to the blacksmith trade

Knowledge of applicable City and department policies, procedures, rules, regulations, and ordinances

### **Skills**

- \*ACTIVE LEARNING - Understand the implications of new information for both current and future problem-solving and decision-making
- \*ACTIVE LISTENING - Give full attention to what other people are saying, taking time to understand the points being made, ask questions as appropriate, and not interrupt at inappropriate times
- \*EQUIPMENT SELECTION - Determine the kind of tools and equipment needed to do a job
- \*REPAIRING - Repair machines or systems using the needed tools

### **Abilities**

- COMPREHEND ORAL INFORMATION - Listen to and understand information and ideas presented through spoken words and sentences
- SPEAK - Communicate information and ideas in speaking so others will understand

- COMPREHEND WRITTEN INFORMATION - Read and understand information and ideas presented in writing
- REASON TO SOLVE PROBLEMS - Apply general rules to specific problems to produce answers that make sense

**Other Work Requirements**

- INITIATIVE - Demonstrate willingness to take on job challenges
- STAMINA - Demonstrate energy and stamina to accomplish work tasks
- DEPENDABILITY - Demonstrate reliability, responsibility, and dependability and fulfill obligations
- ATTENTION TO DETAIL - Pay careful attention to detail and thoroughness in completing work tasks

Other characteristics as required for successful performance in the Blacksmith class

---

All employees of the City of Chicago must demonstrate commitment to and compliance with applicable state and federal laws, and City ordinances and rules; the City's Ethics standards; and other City policies and procedures.

The City of Chicago will consider equivalent foreign degrees, accreditations, and credentials in evaluating qualifications.

\* May be required at entry.

---

City of Chicago  
Department of Human Resources

Date: June, 2010