UNIVERSITY OF SOUTHERN CALIFORNIA

Scientific Glassblower
Job Code: 177027

Grade: J  
OT Eligible: Yes  
Comp Approval: 2/22/2007

JOB SUMMARY:
Provides highly skilled technical work in design, fabrication and repair of product and services of the Glass Shop which supports instructional and research projects.

JOB ACCOUNTABILITIES:

*E/M/NA  % TIME

____  ______  Meets with faculty and researches to discuss work orders and projects. Develops drawings and specifications from general verbal descriptions or rough sketches. Assists with design of projects based on knowledge of design, capacity, properties of glass, quartz, metal and plastics and precision glassblowing and machining techniques.

____  ______  Designs, develops and constructs new and original glass components for equipment and instruments involving complex glass systems and optics to meet specific research needs. Designs and fabricates a large variety of glass high vacuum systems. Provides repair of glass components and manufactures new ones as needed. Performs work with safety as a priority.

____  ______  Analyzes work orders and estimates time, machine and material requirements for completion of job assignments.

____  ______  Interprets specifications, blueprints, sketches and job orders. Prioritizes jobs and accomplishes work by deadlines and within turnover guidelines.

____  ______  Provides consulting services and training to researchers in glass engineering and technology including uses of compatible materials and design of glass systems.

____  ______  Establishes or adjusts work procedures to meet production schedules using knowledge of capacities of machines and equipment and requirements for product performance. Determines new methods and processes to enhance shop efficiency.

____  ______  Maintains time and productions records and reports monthly recharges to the Business Office. Completes necessary paperwork for billing and bookkeeping purposes.Executes budget planning and fiscal solvency.

____  ______  Develops, maintains and enforces internal operating procedures to ensure compliance with safety regulations and security procedures.

____  ______  Maintains and controls inventories at levels adequate to sustain efficient operations. Places special orders for materials and tools based on work orders accepted. Negotiates with vendors for optimal price on goods and services.

____  ______  Coordinates acquisition of specialized equipment through purchases, rental, loan or donation. Surveys vendors to ensure that purchases comply with policies, regulations and good purchasing practices.
Maintains ongoing, updated inventory of department equipment and other related materials. Maintains machines and equipment in safe, operating order. Including cleaning and/or laundering, if applicable. Repairs equipment and/or arranges for repairs that cannot be performed in house. Determines when vendors should be contacted to service equipment.

Analyzes department needs for specialized equipment. Works with purchasing to determine availability, vendors, costs, etc. Prepares reports and makes recommendations for department use.

Ensures compliance with all applicable rules and regulations regarding maintenance and use of specialized equipment.

Maintains currency on latest products and trends by reading trade publications, attending seminars and trade shows, and developing and maintaining vendor contacts.

*Select E (ESSENTIAL), M (MARGINAL) or NA (NON-APPLICABLE) to denote importance of each job function to position.

**EMERGENCY RESPONSE/RECOVERY:**

**Essential:**

- Yes
- No

In the event of an emergency, the employee holding this position is required to "report to duty" in accordance with the university's Emergency Operations Plan and/or the employee’s department’s emergency response and/or recovery plans. Familiarity with those plans and regular training to implement those plans is required. During or immediately following an emergency, the employee will be notified to assist in the emergency response efforts, and mobilize other staff members if needed.

**JOB QUALIFICATIONS:**

**Minimum Education:**

Specialized/Technical Training

**Minimum Experience:**

- 3 Years

**Minimum Field of Expertise:**

Experience as a Master Scientific Glassblower with comprehensive knowledge of custom design, fabrication and repair of specialized apparatus. Must have knowledge of the effects of chemical reactions on materials and properties of various gasses. Basic knowledge of chemistry. Experience with borosilicate, pyrex, and quartz glass. Experience in vacuum line is essential. Experience in glass to metal seals.

**Preferred Experience:**

- 5 Years

**Preferred Field of Expertise:**

Experience as a Scientific Glassblower in a university setting

**Skills: Administrative:**

- Balance figures
- Compose letters
- Compute totals
- Gather data
Input data
Prioritize different projects
Understand and apply policies and procedures
Use computerized spreadsheets
Use database and/or word processing software

Skills: Other:
Analysis
Assessment/evaluation
Communication -- written and oral skills
Conceptualization and design
Negotiation
Networking
Organization
Planning
Problem identification and resolution
Teaching/Training

Skills: Machine:
Calculator
Computer Network (Department or School)
Computer Network (University)
Computer Peripheral Equipment
Fax
Personal Computer
Photocopier

Supervises: Level:

May oversee student, temporary and/or casual workers.

Comments:
Travel required for jobs and errands.

SIGNATURES:

Employee: ___________________________ Date: ___________________________

Supervisor: ___________________________ Date: ___________________________

The above statements are intended to describe the general nature and level of work being performed. They are not intended to be construed as an exhaustive list of all responsibilities, duties and skills required of personnel so classified.

The University of Southern California is an Equal Opportunity Employer