

## **Research Technician, Senior**

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### **GENERAL CLASS DESCRIPTION**

Under general supervision, performs advanced technical work of a mechanical nature in support of in the physical sciences such as, chemistry, physics, metallurgy, and ceramics. Work involves design, operation, and maintenance of specialized scientific research equipment. Provides functional assistance, supervision, and training, as needed, to undergraduate and graduate students, and all laboratory research staff.

### **CHARACTERISTIC DUTIES AND RESPONSIBILITIES**

1. Performs all the duties listed under Research Technician.
2. Performs experiments and independently records data from complex laboratory equipment. Analyzes data and determines validity with reference to the criteria standards, and/or requirements of a particular experiment or process.
3. Designs, assembles, troubleshoots, repairs, modifies, installs, maintains, and operates any laboratory equipment and apparatus.
4. Serves as a source of technical information and instruction to hourly, undergraduate and graduate students and research staff. Provides such information or recommends ideas to define, clarify, enlarge upon, or sharpen procedures and capabilities of specialized research equipment or processes.
5. Prepares and directs laboratory personnel in the preparation and processing of research samples and other work associated with research studies.
6. Provides safety education and oversight in assigned work area.
7. Makes decisions regarding purchases of supplies, services, instruments and equipment.

### **KNOWLEDGES, SKILLS AND ABILITIES**

1. Skill in the design, operation, diagnosis, and repair of laboratory and processing equipment.
2. Skill in metallographic preparation, examination, and analysis of data.
3. Skill in operating microprocessor controlled process equipment and instruments.
4. Knowledge of metallographic procedures for proper cutting, polishing, etching, photographing, and physical characteristic measurements of metal/ceramic specimens.

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**CLASS CODE: 4511**

**PAY GRADE: 415**

5. Knowledge of general safety regulations and chemical hygiene and ability to serve as Safety Representative for the area.
6. Knowledge of the distillation process for pure metals.
7. Knowledge of metal joining techniques and related safety procedures.
8. Knowledge of mechanical and diffusion based vacuum systems and electronics.
9. Ability to perform mathematical calculations.
10. Ability to understand and execute oral and written instructions.
11. Ability to safely operate, repair and maintain standard and specialized research equipment.
12. Ability to collect data and accurately keep appropriate records.
13. Ability to work with chemicals.
14. Ability to lift and move up to 50 pounds on a regular basis.
15. Ability to perform hand-eye tasks in preparing samples.
16. Ability to train and supervise the work of others.

### **MINIMUM ELIGIBILITY REQUIREMENTS**

1. Five years of laboratory experience including two years of Research Technician I or equivalent level of experience, or
2. Graduation from a two year mechanical trade school and two years of related laboratory experience, or
3. Any combination of training and experience from which comparable knowledge and ability can be acquired.

The tasks listed under the heading of Characteristic Duties and Responsibilities are examples of the variety and general nature of duties performed by employees in positions allocated in the class. The list is descriptive only and should be used for no other purpose. It is not intended that any position include every duty listed, nor is it intended that related duties cannot be required.

*Last Revised: March 1, 2003*