

TITLE: <u>Lead Instrument Designer</u>	SALARY SCHEDULE: <u>Staff</u>	CLASS CODE: <u>SA514</u>
UNION: <u>Staff Association – Local 2071, U.A.W</u>	SALARY GRADE: <u>14</u>	EEO CODE: <u>50</u>
	FLSA: <u>Non-Exempt</u>	E- CLASS: <u>SA</u>

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**POSITION PURPOSE**

Coordinate, oversee and participate in the design and machining of equipment and machines used in University research. Utilize specialized knowledge of machine shop equipment and precision tools to instruct others and advise on unit capabilities.

**ESSENTIAL JOB FUNCTIONS**

- Design and fabricate scientific equipment and fixtures used in research tests and experiments. Obtain information from researchers to determine equipment needs and specifications; modify existing equipment to meet new requirements; ensure equipment meets testing standards and demands. Unique testing situations necessitate the use of equipment expertise to make adaptations to meet specifications.
- Consult with researchers about equipment specifications for research tests. Design and machine equipment based on researcher concepts and testing intentions; ensure established deadlines are met; assist in design and set-up of testing situations; work with a variety of precision tooling machines requiring an understanding of use, maintenance and possible modification; utilize special techniques to ensure personal and lab safety. Order materials, supplies and equipment for laboratory use.
- Clean, maintain and repair laboratory equipment and machines. Ensure equipment is in proper working order; disassemble equipment to perform minor repairs; calibrate and realign machines; utilize precision measuring devices to insure equipment will perform properly; repair or rebuild broken parts. Maintain equipment to safety standards; build and install new parts as needed.
- Coordinate unit workload. Prioritize incoming assignments; determine budget priorities; analyze shop performance; assist students and researchers with equipment use and test performance; work with researchers to design and plan experimental tests; ensure supplies and equipment are available and meet requirements. Establish project timetables and assume responsibility for unit output.
- Provide functional supervision to a small number (1-3) of technical and part-time support personnel. Assign, monitor and review work activities. Train in appropriate methods and procedures. Advise faculty, students and lower level technical staff on safe operation and capabilities of equipment.
- Perform related work as assigned.

### **ADDITIONAL COMMENTS**

This classification level utilizes specialized knowledge of instrument design and fabrication as well as mastery of complex precision tooling machines in order to coordinate and participate in the manufacture of laboratory test equipment in support of University research. Position duties necessitate experience repairing and modifying equipment. Incumbents have latitude in determining which among many procedures and techniques should be followed along with the sequence to be followed. Differing situations necessitate that the incumbent search for solutions or new applications within an area of learned skills. Incumbents must exercise keen attention to detail and the ability to communicate effectively with others. Functional work direction is provided to a small number (1-3) of lower level technical and part-time temporary positions. Work activities necessitate incumbents to use light physical effort consistent with frequent use of relatively light objects, materials and tools. This classification is typically found in academic support units and reports to and receives work direction from a management level position.

### **MINIMUM QUALIFICATIONS**

- High school graduate or an equivalent combination of education and/or experience.
- Ability to make a variety of mathematical computations.
- Keen attention to detail.
- Extensive machining experience.
- Considerable design and layout experience.
- Extensive experience in a machine shop.
- Prior supervisory experience desirable.
- Prior computer experience desirable.
- Ability to communicate effectively with others.
- Considerable welding experience.
- Typically, incumbents have held Instrument Maker or Instrument Technician positions.