DEFINITION

Under the direction of an instructor or assigned supervisor or manager, assist in the instructional program by performing complex technical work associated with HVAC and refrigeration equipment and systems in an environmental control technology instructional laboratory.

DISTINGUISHING CHARACTERISTICS

The Instructional Lab Technician class is distinguished from the Instructional Assistant class in that positions assigned to the class of Instructional Lab Technician oversee a complex instructional laboratory for an academic or vocational area and must possess extensive technical or academic training and experience in the field of specialty. Under the direction of an administrator or specified faculty member, incumbents work independently and provide work direction and training to Instructional Assistants and/or student assistants.

EXAMPLE OF DUTIES

1. Oversee the operation and maintenance of an instructional laboratory environment in the subject of environmental control technology; train and direct the work of Instructional Assistants and student assistants.

2. Assist instructors, staff, and students in the operation of equipment and instrumentation common to the environmental control field; assist students as directed in the completion of required assignments.

3. Prepare and issue materials and equipment for student use; maintain records of materials and equipment loaned out to students.

4. Order, receive, catalog, and store supplies, materials, and equipment; maintain inventories, ensuring that adequate quantities are available for timely instructional use; mark equipment with approved identification.

5. Prepare instructional materials and equipment for student use or instructor demonstration as needed according to approved procedures; update classroom materials as directed.

6. Provide technical assistance in the preparation of specifications for equipment and material purchases; recommend selection of equipment as requested; may interview vendors to assess new equipment and supplies.

7. Test, adjust, and maintain equipment in a safe and useable condition; make visual and operational checks of equipment to ensure it is functioning properly; assure proper storage and handling of equipment.

8. Make minor repairs on equipment; trouble-shoot malfunctioning equipment, repair and replace broken or damaged parts such as electrical connections or power cords; arrange for major repairs per policy.

9. Develop prototype equipment and special demonstrations for the instructional program which may require fabricating, fitting, welding, and/or soldering skills.

10. Maintain laboratory and/or storeroom in a safe, clean, and orderly condition.

11. Assist in the preparation of the laboratory budget; monitor budget expenditures.
12. Perform clerical duties, such as answering telephones and taking messages, opening and routing mail, scheduling appointments, collecting fees, scoring and recording student assignments, preparing reports, and maintaining records and files.

13. Assist as directed in the enforcement of district and department policies for facilities and equipment utilization.

14. Perform related duties as assigned.

**DESIRABLE QUALIFICATIONS**

**Knowledge:**
- District organization, operations, policies, and objectives.
- English usage, grammar, spelling, punctuation, and vocabulary.
- Energy management systems.
- Environmental Protection Agency regulations related to HVAC.
- General needs and behavior of students of various ethnic, racial, and cultural backgrounds.
- Health and safety regulations.
- Oral and written communication skills.
- Principles and practices of work direction and training.
- Principles, practices, and procedures of the industry, especially the maintenance and repair of environmental control equipment.
- Record-keeping techniques.
- Safety regulations involving environmental control technology.
- Technical aspects of HVAC, electrical, plumbing, and environmental control.

**Skills and Abilities:**
- Assemble, maintain, and repair laboratory equipment.
- Assist students in understanding and applying basic principles of environment control technology.
- Communicate effectively both orally and in writing.
- Demonstrate competence in the field of environmental control technology.
- Ensure the care and security of assigned equipment, materials, and supplies.
- Establish and maintain effective working relationships with others.
- Explain work assignments to students.
- Inspect, disassemble, maintain, service, test, repair, and operate HVAC and refrigeration equipment.
- Install and adjust HVAC and refrigeration equipment.
- Issue and receive equipment and supplies.
- Learn and apply techniques of precise measurement and notation.
- Maintain records and prepare reports.
- Make simple arithmetic calculations.
- Meet schedules and time lines.
- Operate energy management system equipment and testing devices.
- Plan and organize work.
- Relate effectively with people from varied cultural and socio-economic backgrounds.
- Train and provide work direction to others.
- Understand and follow oral and written directions.
- Work cooperatively with others.
- Work independently with little direction.

**Training and Experience:**
Any combination of training and experience equivalent to: satisfactory completion of 15 semester units of courses related to environmental control technology and at least two years of successful work experience in the field of environmental control technology, including HVAC electrical and plumbing. Experience in an instructional setting is desirable.
WORKING CONDITIONS

Physical Requirements:
Category II

Environment:
Favorable, involves an instructional laboratory setting. May be exposed to some fumes.