Technical Services Supervisor, Ray W. Herrick Laboratories, Purdue University

Posting Summary:

Provide design services for research projects including consulting with faculty, students and sponsors on the design and fabrication of experimental set -ups, estimating costs, time, and equipment required to meet project objectives, and design specification. Work with graduate students, technical staff and faculty, to facilitate design and fabrication of various mechanical and electro-mechanical devices and systems. Similarly, facilitate design, fabrication and installation of instrumentation, electronics, and computer interfaces for experiments. Advise graduate students, undergraduates and service personnel concerning technical details and instrumentation. Supervise Technical Services staff. Provide or coordinate training for students/faculty/staff related to software and hardware used in experimental research. Advise graduate students, undergraduates and service personnel concerning technical details and instrumentation. Supervise Technical Services staff. Oversee building facilities support, materials handling, safety, security, shipping and receiving, and REM functions for the Herrick Labs.

Required:

- Bachelor's degree in Mechanical Engineering, Electrical Engineering Technology, or closely related field.
- Three years experience in project, personnel, and facilities management.
- Supervisory experience with ability to oversee and train employees including scheduling work assignments, handling performance evaluations, and fostering a cooperative work environment.
- Ability to make administrative/procedural decisions and judgments.
- Skill in budget preparation and fiscal management.
- Knowledge of laboratory operations and/or procedures; plus principles and procedures of scientific research.
- Ability to identify and resolve technical research problems.
- Knowledge of electronics, instrumentation, calibration and experimental measurements procedures.

Ray W. Herrick Labs, Technical Services Supervisor Position.

Jobs at Purdue: http://purdue.taleo.net/careersection/wl/joblist.ftl Search: Keywords: Herrick Technical Services Job Number: 1300652. Information about working at Purdue: http://www.purdue.edu/hr/careers/

- Strong interpersonal and (oral & written) communication skills and the ability to work effectively with a wide range of customers in a diverse community.
- Ability to advise students in selection of appropriate scientific instrumentation and computer hardware and software.
- Knowledge of chemical, hazardous waste, industrial hygiene, and/or environmental health standards.
- Knowledge of the use and maintenance of laboratory facilities and/or equipment.
- Technical skills in four or more of the following:
 - (a) Air conditioning and Refrigeration;
 - (b) Automotive Systems, Engines and Power Generation Machinery;
 - (c) Automated Building/Environmental Controls,
 - (d) Experimental Controls Systems and Engineering Instrumentation;
 - (e) Electrical Wiring; Electronics; Industrial Power Transmission;
 - (f) Acoustics and Vibrations Experiments and Measurements, and
 - (g) skills and/or sufficient knowledge to supervise all of the following activities: Carpentry, Machining, Plumbing, Sheet Metal Fabrication and Welding.
- Willingness to learn new things and be adaptable.

Preferred:

- College coursework in Supervision and Management.
- Experience and technical expertise in research instrumentation, HVAC, Automotive, manufacturing processes and /or machine design.
- EPA Universal Refrigeration license, ASE Master, L1 certification.

About The Ray W. Herrick Laboratories

Ray W. Herrick Laboratories, School of Mechanical Engineering, Purdue University,

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https://engineering.purdue.edu/Herrick

Mission:

An institution dedicated to graduate education and engineering research with emphasis on technology transfer to industry.

Vision:

Overcome barriers between knowledge creation, transfer, and utilization in engineering research, industry application, and graduate education.

Overview

The Laboratories were 50 years old in 2008. Today we are part of the School of Mechanical Engineering, but the 14-20 Mechanical Engineering faculty who do research here collaborate on interdisciplinary research projects with faculty in the other Schools of Engineering and also with faculty in the College of Science and the College of Liberal Arts. There are four main technical areas of research with some over arching themes related to energy utilization and efficiency, reduction of pollutants in the environment, quality of life, and sustainability and safety. The main technical areas are:

- Thermal Systems and Air Quality, High Performance Buildings
- Noise and Vibration Control
- Electromechanical Systems: controls, signal processing, sensing, diagnostics and prognostics.
- Modeling of Human Response for Machine and System Optimization

Applications include smart buildings, alternative refrigerants, self diagnosing systems, noise reduction in transportation, energy efficient machines, environmental noise, compressors, appliances, electronic equipment cooling, new refrigeration cycles, aircraft interior air management, mitigation of chemical and biological transport in buildings, engine controls to optimize use of alternative fuels, after treatment systems for engines, power generation, tire-road surface design to reduce community noise, printer design, and tactile communications interfaces.

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Students:

Currently we have just over eighty graduate students studying at the Laboratories. About one-half are doing a Masters Thesis and the others are studying for a Ph.D. We have a number of visiting international scholars and also undergraduates involved in research projects. Many projects are sponsored by industry and all are relevant to industry needs, which is in keeping with our mission. Each student has many opportunities to interact with people from industry, including our Industrial Advisory Committee.

Staff

Currently there are two full time and three part-time technical staff supporting the operations at the laboratories. In addition, there are three administrative/secretarial staff who support the research operations and organization of short courses and conferences including the bi-annual international compressor, refrigeration and high performance buildings conferences organized by the laboratories which attract around 600 people from 30 countries.

Facilities

The Laboratories occupy three adjacent buildings, the most recent, now headquarters for the administrative staff, students and faculty, was opened in November 2013. The Laboratories have many specialized facilities including: 3 pairs of psychrometric chambers; 4 engine test cells plus 2 other engine test stands; several hydraulic and electromagnetic shakers including a 6 axis TEAM cube; two air quality chambers; a living laboratory (four 20 person student offices that are reconfigurable in terms of lighting, heating, ventilation, shading, the building envelope, and automated controls; several acoustic chambers including a reverberation, an anechoic and a semi-anechoic chamber; and a perception-based engineering laboratory where people can be exposed to controlled environments and stimuli. There is also a large pool of equipment shared by researchers.

Our Mode of Operation

We foster a community of sharing and of helping each other. One of our alums was so positive about this aspect of the labs that he coined an acronym FASTID-C: Family, Acceptance, Sharing, Trust, Interdependence, Diversity -Community.