THE UNIVERSITY OF WYOMING
JOB DESCRIPTION

This is a description of a staff position at the University of Wyoming not a job opening announcement. Look for current job openings at the following link: UW Human Resources.

The following 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.

Title: ENGINEER, SENIOR

Reports To: Designated Supervisor

UW Job Code: 3874

UW Job Family: 3E - Engineers/Research

SOC Code: 17-2199

FLSA: Exempt

Pay Grade: 27

Date: 4-1-95 (revised 7-1-02; 7-19-02; 4-13-04; 7-1-04; 7-1-08)

JOB PURPOSE:

Provide professional direction to and coordination of other engineers, technicians and/or skilled trade employees in planning and designing engineering construction/remodeling projects and research for a designated department; may direct and supervise the operational, personnel and basic engineering functions of that department. Provide engineering expertise and clearly define appropriate approaches and solutions to complex problems and projects.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Advise, recommend, and oversee the design, fabrication and maintenance of complex engineering systems.
- Independently interpret, organize, execute, and coordinate engineering assignments concerned with unique problems.
- Develop model concepts and approaches as an individual researcher and act independently on technical matters.
- Design, perform, and oversee engineering experiments, tests, and data collection to ensure data integrity, quality control, and protocol compliance.
- Make authoritative decisions and recommendations that have a major impact on extensive engineering projects, research programs and activities; may write and administer contracts.
- Review and evaluate results and conclusions of projects.
- Assist in planning and implementing scientific system long-range goals including operations, facility improvement and data processing.
- Provide technical support to graduate students, faculty and staff in system concept, design and fabrication.
- May prepare grant proposals to obtain funding in support of engineering activities.
- May serve as principal investigator on single or multiple projects.

SUPPLEMENTAL FUNCTIONS:

- Develop and prepare budget recommendations for personnel and materials for individual projects; monitor expenditures.
- Expand knowledge of new technologies in the field of engineering.
- May serve on University committees as required.

COMPETENCIES:

- Analysis/Problem Identification
- Attention to Detail
- Initiative
- Innovation
- Integrity
- Quantity of Work
- Quality Orientation
- Strategic Planning

MINIMUM QUALIFICATIONS:

Education: **Bachelor's degree in a related field**

Experience: **7 years work-related experience**

Required licensure, certification, registration, or other requirements:

- **Professional Engineer Licensure in the appropriate field**

KNOWLEDGE, SKILLS, AND ABILITIES:

Knowledge of:

- Basic, routine, and advanced engineering principles, practices, and protocols of the specific field.
- Basic, routine and advanced data collection techniques.
- American Society for Testing and Materials, test methodology.
- Personal computers and software in use in the department.
- Advanced mathematical concepts.
- Advanced trends, methods, materials and equipment of the area.
- Basic, routine and advanced blueprints, drawings, and schematics.
- Basic, routine and advanced prototype fabrication.
- Advanced engineering experiments, and tests.
- Occupational hazards and safety precautions of the trade.

Skills and Abilities to:

- Conduct independent, original research in an advanced area of scientific expertise.
- Conduct systematic analysis and develop solutions to complex scientific problems.
- Utilize, test, maintain, and modify a range of engineering equipment.

- Build and test basic, routine, and advanced engineering and/or scientific systems and components.
- Design, assemble and configure basic, routine, and advanced engineering prototype models.
- Design and configure basic, routine and advanced test apparatus, circuitry, and equipment.
- Read, understand, and follow safety procedures.
- Accurately document work in process.
- Design basic, routine, advanced schematics and mechanical drawings.
- Design, organize, and coordinate basic, routine and advanced scientific and/or engineering research projects.
- Use independent judgment to develop model concepts and approaches for research.
- Develop and follow research methodology and protocol.
- Draw conclusions and make recommendations based on research data and findings.
- Communicate effectively both orally and in writing.
- Work as a team member and foster a cooperative work environment.

WORKING CONDITIONS:

Standard office, shop or lab environment. Routine exposure to mechanical and electrical hazards, fumes, dust and noise; occasionally subject to adverse weather conditions.

DISTINGUISHING FEATURES:

Engineer: Provides engineering expertise for designated department. Coordinates, supervises and evaluates all functions related to construction project(s), and/or designs or repairs. Develops, interprets and executes project plans. Maintains and fabricates instruments for research projects.

Engineer, Senior: Provides professional direction to and coordination of other engineers, technicians and/or skilled trade employees in planning and designing engineering construction/remodeling/research projects and research for a designated department; may direct and supervise the operational, personnel and basic engineering functions of that department. Provide high-level engineering expertise and clearly defines appropriate approaches and solutions to complex problems and projects.

Authorized by Classification/Compensation, Human Resources

Employees may be requested to perform job-related tasks other than those specifically presented in this description. Participating in the University's hazardous waste minimization program is part of the job of each employee who uses (or may come in contact with) hazardous materials. Fair Labor Standards Act (exempt/non-exempt) is designated by position. University of Wyoming actively supports Americans with Disabilities Act and will consider reasonable accommodations.