AUBURN
Human Resources

Research Engineer II-Sensing Technologies

Job Description

JOB INFORMATION

Job Code	JA25
Job Description Title	Research Engineer II-Sensing Technologies
Pay Grade	RE09
Range Minimum	$58,600
33rd %	$72,270
Range Midpoint	$79,110
67th %	$85,950
Range Maximum	$99,620
Exemption Status	Exempt
Organizational use restricted to the following divisions	128 Samuel Ginn Col of Engineering
Approved Date:	4/11/2025 5:30:05 PM

JOB FAMILY AND FUNCTION

Job Family:	Research
Job Function:	Disciplinary Research

JOB SUMMARY

This position supports advanced experimental research in the development of sensing technologies, nanomaterials, and microsystems with applications in biomedical and environmental engineering. The role involves designing, fabricating, and integrating specialized platforms for real-time analysis and diagnostics at the micro- and nanoscale, thereby contributing significantly to the department's interdisciplinary research objectives.

RESPONSIBILITIES

- Designs and develops advanced sensing platforms for experimental applications involving nanomaterials, microfluidics, and biomedical diagnostics.
- Conducts and optimizes laboratory experiments focused on sensor fabrication, surface functionalization, material characterization, and microscale system integration.
- Analyzes and interprets experimental data using quantitative and computational tools; documents findings in detailed technical reports and publications.
- Collaborates with faculty, students, and research staff on interdisciplinary research projects; contributes to proposal development and reporting for sponsored research.
- Operates and maintains specialized lab equipment, including optical imaging systems, fluidic platforms, and materials synthesis instruments.
- Provides technical training and mentorship to graduate and undergraduate students on research techniques and lab protocols.

The responsibilities listed above show the typical duties for jobs in this classification. Actual tasks may differ depending on the department's needs. Other similar duties may be assigned with discretion of the supervisor. Not every duty will apply to every position, and the amount of time spent on each task can change based on department needs.

SUPERVISORY RESPONSIBILITIES

Supervisory Responsibility	May supervise employees but supervision is not the main focus of the job.

MINIMUM QUALIFICATIONS

To be eligible, an individual must meet all minimum requirements which are representative of the knowledge, skills, and abilities typically expected to be successful in the role. For education and experience, minimum

requirements are listed on the top row below. If substitutions are available, they will be listed on subsequent rows and may only to be utilized when the candidate does not meet the minimum requirements.

MINIMUM EDUCATION & EXPERIENCE

Education Level	Focus of Education		Years of Experience	Focus of Experience	
Bachelor's Degree	Materials Science, Materials Engineering, Chemical Engineering, Biomedical Engineering, Mechanical Engineering, Environmental Engineering, Electrical Engineering, or Physics	and	2 years of	Experience in the performance of research and analysis related to sensing technologies, nanomaterials, and microsystems	Or
Master's Degree	Materials Science, Materials Engineering, Chemical Engineering, Biomedical Engineering, Mechanical Engineering, Environmental Engineering, Electrical Engineering, or Physics	and	0 years of	Experience in the performance of research and analysis related to sensing technologies, nanomaterials, and microsystems	

MINIMUM KNOWLEDGE, SKILLS, & ABILITIES

Professional knowledge and expertise in experience in research practices and protocols related to the development of sensing technologies, nanomaterials, and microsystems with applications in biomedical and environmental engineering.	
Highly advanced knowledge in the field of research and the design of experiments and broad expert knowledge of a wide range of complex equipment, materials and processes related to research planning, funding, and operations.	
Expertise in Laboratory Operations and Management Systems.	
Enhanced problem-solving abilities to optimize and expand research system scalability.	
Proficiency in coordinating research endeavors with a diverse array of subject matter experts to advance interdisciplinary research initiatives.	
Hands-on experience with material characterization techniques, surface chemistry, and optical or electrochemical sensing is essential	

MINIMUM LICENSES & CERTIFICATIONS

Licenses/Certifications	Licenses/Certification Details	Time Frame	Required/ Desired	
	Some positions may require licensure as a professional engineer.	Upon Hire	Required	

PHYSICAL DEMANDS & WORKING CONDITIONS

Physical Demands Category:	Other

PHYSICAL DEMANDS

Physical Demand	Never	Rarely	Occasionally	Frequently	Constantly	Weight
Standing				X		
Walking				X		
Sitting				X		
Lifting		X				25 lbs
Climbing	X					

PHYSICAL DEMANDS

Physical Demand	Never	Rarely	Occasionally	Frequently	Constantly	Weight
Stooping/ Kneeling/ Crouching			X			
Reaching			X			
Talking				X		
Hearing				X		
Repetitive Motions				X		
Eye/Hand/Foot Coordination				X		

WORKING ENVIRONMENT

Working Condition	Never	Rarely	Occasionally	Frequently	Constantly
Extreme cold			X		
Extreme heat			X		
Humidity			X		
Wet			X		
Noise			X		
Hazards			X		
Temperature Change			X		
Atmospheric Conditions			X		
Vibration			X		

Vision Requirements:

Ability to see information in print and/or electronically and distinguish colors.