Job Family Matrix

Job Function: Research	**Job Family:** Core Engineer - Professional

Job Family Summary: Perform or manage a range of professional engineering responsibilities within a research core facility (i.e., cleanrooms, cryo facilities, machine shops, instrumentation design and fabrication facilities, etc.) for a broad constituency of clients including providing expert calibration of highly specialized equipment, development and implementation of testing and diagnostic tools, advising on methods, and maintaining specialized instruments such as vacuum equipment, electro-mechanical systems, semi-conductor equipment, cryogenic systems, etching systems, laboratory automation systems, etc. These jobs are typically located in core facilities.

Job Title: Research Core Engineer II	**Job Title:** Research Core Engineer III	**Job Title:** Research Core Engineer IV
Job Code: R0056P	**Job Code:** R0057P	**Job Code:** R0058P
Grade Level: 56 **Exemption:** Exempt	**Grade Level:** 57 **Exemption:** Exempt	**Grade Level:** 58 **Exemption:** Exempt
Effective/Revision Date: December 2022	**Effective/Revision Date:** December 2022	**Effective/Revision Date:** December 2022
Job Summary	**Job Summary**	**Job Summary**
Provide professional engineering expertise in a core facility in process design, training, quality assurance, and developmental activities.	Independently provide professional engineering expertise in a core facility in process design, training, quality assurance, and developmental activities.	Lead and provide professional engineering expertise in a core facility in process design, training, quality assurance, and developmental activities.
Typical Core Duties	**Typical Core Duties**	**Typical Core Duties**
• Assist researchers with experimental design, use of equipment, and data collection. Analyze data and review identifiable factors to meet research goals. Assist researchers with use of equipment, instruments, systems, and facilities • Assist with the evaluation, installation, maintenance, and monitoring state-of-the-art process equipment, other specialized instrumentation, and/or mechanical, electrical, or plumbing (MEP) systems needed to support instrumentation • Provide training to researchers, faculty, and students to advance knowledge of the equipment, instruments/systems, and lab-specific safety protocols and best practices • Collaborate with staff and make recommendations to develop processes and facility workflows; bassist with preparation of training manuals including standard operating procedures and related documents • Assist with monitoring of laboratory safety compliance and ensure compliance with University policies, procedures, and applicable legal rules and regulations	• Represent core on scientific research projects. Assist researchers with experimental design, data collection, and/or analyses; analyze and evaluate identifiable factors to meet research goals. Assist researchers with use of equipment, instruments, systems, and facilities • Evaluate, install, maintain, monitor, and participate in the selection of state-of the art process equipment, other specialized instrumentation, and/or mechanical, electrical, or plumbing (MEP) systems needed to support instrumentation • Provide training to researchers, faculty, and students to advance knowledge of the equipment, instruments/systems, and lab-specific safety protocols and best practices; serve as technical/engineering expert • Collaborate with staff and assist with the development of processes and facility workflows; prepare training manuals including standard operating procedures and related documents • Write and co-author scientific papers and other publications. • Monitor laboratory safety compliance and ensure compliance with University policies, procedures, and applicable legal rules and regulations	• Represent core on scientific research projects; may lead complex projects. Provide guidance with respect to experimental design, data collection, and/or analyses; analyze and evaluate identifiable factors to meet research goals. Assist researchers with use of equipment, instruments, systems, and facilities • Evaluate, install, maintain, monitor, and participate in the selection of state-of the art process equipment, other specialized instrumentation, and/or mechanical, electrical, or plumbing (MEP) systems needed to support instrumentation; may act as lead. Coordinate with vendors, as needed, for equipment inspection, repair, and service contracts • Provide training to researchers, faculty, and students to advance knowledge of the equipment, instruments/systems, and lab-specific safety protocols and best practices; serve as technical/engineering expert • Collaborate with staff to develop processes and facility workflows. Prepare training manuals including standard operating procedures and related documents • Write and co-author scientific papers and other publications • Collaborate with various departments and serve as a consultant • Monitor of laboratory safety compliance and ensure compliance with University policies, procedures, and applicable legal rules and regulations

Job Family Matrix

Basic Qualifications	Basic Qualifications	Basic Qualifications
• Bachelor's degree in an engineering or related field and one year of relevant work experience; or • A minimum of five years of relevant work experience or equivalent combination of education and experience	• Bachelor's degree in an engineering or related field and a minimum of three years' relevant work experience; or • A minimum of seven years of relevant work experience or equivalent combination of education and experience	• Bachelor's degree in an engineering or related field and a minimum of five years' relevant work experience, or • A minimum of nine years of relevant work experience or equivalent combination of education and experience
Additional Qualifications and Skills	**Additional Qualifications and Skills**	**Additional Qualifications and Skills**
• Knowledge of Microsoft Office Suite, intermediate Excel skills • Excellent communication skills in the English language, both written and oral • Must possess excellent problem-solving skills	• Knowledge of Microsoft Office Suite, intermediate Excel skills • Excellent communication skills in the English language, both written and oral • Must possess excellent problem-solving skills	• Knowledge of Microsoft Office Suite, intermediate Excel skills • Excellent communication skills in the English language, both written and oral • Must possess excellent problem-solving skills
Certificates and Licenses	**Certificates and Licenses**	**Certificates and Licenses**
Physical Requirements	**Physical Requirements**	**Physical Requirements**
• Lifting (up to approximately 50 pounds), bending, and other physical exertion • Standing and/or sitting for extended periods	• Lifting (up to approximately 50 pounds), bending, and other physical exertion • Standing and/or sitting for extended periods	• Lifting (up to approximately 50 pounds), bending, and other physical exertion • Standing and/or sitting for extended periods
Working Conditions	**Working Conditions**	**Working Conditions**
• May be required to work in a cleanroom, chemical, or measurement laboratory environments • May be exposed to toxic, radioactive, or carcinogenic materials including compressed gases, acids, solvents, vacuum pump oils, and other chemicals • May be required to work nights and weekends	• May be required to work in a cleanroom, chemical, or measurement laboratory environments • May be exposed to toxic, radioactive, or carcinogenic materials including compressed gases, acids, solvents, vacuum pump oils, and other chemicals • May be required to work nights and weekends	• May be required to work in a cleanroom, chemical, or measurement laboratory environments • May be exposed to toxic, radioactive, or carcinogenic materials including compressed gases, acids, solvents, vacuum pump oils, and other chemicals • May be required to work nights and weekends

Job Family Matrix

Job Function: Research	**Job Family:** Core Engineer - Professional

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Job Title: Research Core Engineer V

Job Code: R0059P

Grade Level: 59 **Exemption:** Exempt

Effective/Revision Date: December 2022

Job Summary

Manage and provide professional engineering expertise in a core facility in process design, training, quality assurance, and developmental activities.

Typical Core Duties

- Serve in a lead role and represent core on complex development processes and projects. Provide guidance with respect to experimental design, data collection and/or analyses; analyze and evaluate identifiable factors to meet research goals. Assist researchers with use of equipment, instruments, systems, and facilities
- Evaluate, install, maintain, monitor, and participate in the selection of state-of the art process equipment; other specialized instrumentation, and/or mechanical, electrical, or plumbing (MEP) systems needed to support instrumentation; may act as lead. Coordinate with vendors, as needed, for equipment inspection, repair, and service contracts
- Provide training to researchers, faculty, and students to advance knowledge of the equipment, instruments/systems, and lab-specific safety protocols and best practices; serve as key engineering liaison
- Collaborate with staff to develop processes and facility workflows; Prepare training manuals including standard operating procedures and related documents
- Participate in proposal development and may be eligible for Principal Investigator rights
- Write and co-author scientific papers and other publications
- Collaborate with various departments and serves as a consultant/subject matter expert
- Monitor laboratory safety compliance and ensure compliance with University policies, procedures, and applicable legal rules and regulations

Job Family Matrix

Basic Qualifications

- Bachelor's degree in an engineering or related field and a minimum of eight years of relevant work experience; or
- Minimum of twelve years of relevant work experience or equivalent combination of education and experience

Additional Qualifications and Skills

- Master's degree in an engineering or related field
- Knowledge of Microsoft Office Suite, intermediate Excel skills
- Excellent communication skills in the English language, both written and oral
- Must possess excellent problem-solving skills

Certificates and Licenses

Physical Requirements

- Lifting (up to approximately 50 pounds), bending, and other physical exertion
- Standing and/or sitting for extended periods

Working Conditions

- May be required to work in a cleanroom, chemical, or measurement laboratory environments
- May be exposed to toxic, radioactive, or carcinogenic materials including compressed gases, acids, solvents, vacuum pump oils, and other chemicals
- May be required to work nights and weekends