

SENIOR RESEARCH PROJECT ENGINEER  
or  
SENIOR RESEARCH PROJECT MANAGER

Function of Job:

Under general administrative direction of designated supervisor, design, develop, test, calibrate, and operate instrumentation for engineering/research projects and/or plan, conduct, manage, and supervise research, design, and development of engineering/research projects of major importance and scope.

Characteristic Duties and Responsibilities:

1. Manage and supervise assigned highly complex engineering/ research projects of major importance and scope.
2. Manage project plans, including tracking schedules and costs, coordinating information with project sponsor, reporting status of schedules, and meeting contractual obligations, including coordination with subcontractors and USNH staff.
3. Serve as primary contact with sponsor as assigned and/or in absence of program manager.
4. Develop risk management processes for each assigned project, conduct reviews and assessments of risks to project success; develop and implement risk mitigation plans as needed, and provide monthly risk status report to sponsors.
5. Manage and supervise work of engineers, technicians, and others assigned to projects.
6. Estimate manpower requirements and needs; schedule work to meet completion dates, technical specifications, and compliance with sponsor's Earned Value Management (EVM) Systems.
7. Develop technology to generate reports to sponsors that include identifying variances, trend analysis, and corrective action.
8. Evaluate project progress and results, and effect changes in procedures or objectives as needed.
9. Develop new programs, review current programs, and establish communications channels for collaborative research efforts.
10. Prepare research proposals and cost estimates as required.
11. Organize and maintain project documentation to meet contractual and legal obligations.
12. Provide technical direction and specialized expertise for on-going research associated with projects; participate directly in research projects as required.
13. Manage computer programming and/or other technology efforts associated with projects.
14. Review and comment to instrumentation requirements and specifications provided by project sponsors; collaborate and negotiate as needed to reach agreements that optimize system definition and performance within project constraints.
15. Prepare technical requirements and specifications for instrumentation to be designed and developed by subcontractors and/or project partners.
16. Develop and maintain documentation to guide and control technical requirements and interfaces.
17. Review instrumentation designs of peer engineers or engineers developing interfacing hardware.
18. Investigate options for parts, materials and processes to be procured and utilized for instrument design and development; conduct trade studies to identify the optimum approach.

19. Design, develop, build, test, calibrate, and operate instrumentation that meets the measurement, resource, environmental and performance requirements of various engineering or scientific research projects.
20. Prepare test procedures and design, build and maintain support systems to test and calibrate the subject instrumentation.
21. Design and conduct tests to demonstrate compliance with requirements; prepare associated test reports for submission to project sponsors.
22. Present designs, development processes and results at project review.
23. Provide guidance and assistance to all engineers associated with the project.
24. Perform related duties as assigned.

Minimum Acceptable Qualifications:

1. PhD in appropriate field of Engineering or Physics or a closely related scientific or technical field and three years of related engineering or project management experience; or Master's and eight years of related experience; or Bachelor's degree and ten years of related experience.
2. Advanced expertise in the design of complex components, equipment, and analysis of experimental data.
3. Thorough knowledge of computer programming and engineering design.
4. Strong interpersonal and written communication skills.

Additional Desirable Qualifications:

1. Experience in the design and construction of equipment and/or systems related to research and development projects.
2. Ability to program computers using advanced and assembly languages.
3. Experience managing major research projects.
4. Experience with government contract reporting requirements and practices.

9/15/08

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System Approval

11/12/08

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Effective Date

**This document is a generic classification specification of the University System of New Hampshire. Its purpose is to describe the representative responsibilities and general level of complexity, and it is not a substitute for the specific job description of the individual position.**