Non-Faculty Scientific and Research Staff Specifications
(Grades 6 – 9)

**Technicians Class Specifications**
Incumbent evaluates, selects, and applies standard engineering/scientific research techniques under the technical direction of principal investigators or project leaders.

**Senior Research Technicians (6)**

**Qualifications:** AAS and/or experience.

**Knowledge:** Broad knowledge of engineering or scientific techniques used in research or support laboratories.

**Supervisory Duties:** May be supervisory or non-supervisory.

**Complexity:** Work is performed under intermittent supervision.

**Scope and Effect:** Assignment of projects with broader independence to formulate projects.

**Illustrative Examples of Work:**
- Independently pursues an assigned series of processes, procedures, or area of research in accordance with general approved plans and procedures;
- plans and executes procedures and work details;
- evaluates and analyzes results;
- constructs, modifies, adapts, assembles, and operates scientific and laboratory apparatus and equipment;
- uses computer equipment for controlling equipment and compiling data;
- makes and records observations and measurements;
- summarizes and evaluates data for scientific materials requiring academic knowledge;
- researches and catalogs reference materials requiring understanding of subject matter theory;
- plans and supervises technical operations; and
- is responsible for maintenance of research/academic laboratory spaces.
Specialists Class Specifications
Incumbent independently designs and performs a wide range of highly technical and complex research, field, or laboratory tasks under the technical direction of principal investigators or project leaders.

Research Specialists (6)

Qualifications: BS in related field.

Knowledge: Understanding of highly technical and complex research and laboratory tasks.

Supervisory Duties: May be supervisory or non-supervisory.

Complexity: Work is performed under general supervision.

Scope and Effect: Performs a variety of defined research and laboratory tests and experiments according to prescribed protocols and assigned schedules.

Illustrative Examples of Work:
- sets up experiments as prescribed by a principal investigator;
- may participate in laboratory maintenance activities such as sterilization and cleaning of equipment, ordering of supplies, inventory and media preparation;
- maintains records, files and logs of work performed in laboratory notebooks and computer databases;
- compiles data and record results of studies for publications, grants and seminar presentations;
Senior Research Specialists (7)

Qualifications: BS in related field + 3 years of experience.

Knowledge: Advanced knowledge of research techniques and equipment.

Supervisory Duties: May be supervisory or non-supervisory.

Complexity: Independently performs a wide range of highly technical and complex research and laboratory tests and procedures.

Scope and Effect: Devises highly specialized research procedures and provides input to protocol development; and serves as a technical resource for other research personnel.

Illustrative Examples of Work:
- analyzes and interprets the results of studies;
- investigates and recommends alternative approaches to improve the quality of results;
- trains research staff in specialized procedures and theoretical concepts for unique tests;
- recommends new equipment and supplies needed for specialized procedures;
- provides input into the development of departmental goals and objectives;
- may assist in grant and other funding application preparation;
- reviews literature for related research developments and techniques;
- prepares written materials, charts and graphs on specialized techniques and research results for publication or presentation;
- oversees quality assurance of research performed by others; and
- monitors the handling, storage and disposal of hazardous substances.
Principal Research Specialists (8)

**Qualifications:** BS in related field + 5 years of experience.

**Knowledge:** Advanced knowledge of research techniques and equipment.

**Supervisory Duties:** May be supervisory or non-supervisory.

**Complexity:** Independently performs a wide range of highly technical and complex research and laboratory tests and procedures.

**Scope and Effect:** Devises highly specialized research procedures and provides input to protocol development; and serves as a technical resource for other research personnel.

**Illustrative Examples of Work:**
- analyzes and interprets the results of studies;
- investigates and recommends alternative approaches to improve the quality of results;
- trains research staff in specialized procedures and theoretical concepts for unique tests;
- recommends new equipment and supplies needed for specialized procedures;
- provides input into the development of departmental goals and objectives;
- may assist in grant and other funding application preparation;
- reviews literature for related research developments and techniques;
- prepares written materials, charts and graphs on specialized techniques and research results for publication or presentation;
- oversees quality assurance of research performed by others; and
- monitors the handling, storage and disposal of hazardous substances.
Researcher Class Specifications

Incumbent plans, executes, and reports laboratory, field, or other research project or programs. Also can serve as principal investigator and provide technical oversight of research activities.

Associate Researcher (6)

Qualifications: BS in applicable field.

Knowledge: Advanced knowledge of research or engineering principles and practices.

Supervisory Duties: May be supervisory or non-supervisory.

Complexity: Must function with considerable autonomy in a respective discipline and incumbents serve as a resource to staff on technical and scientific issues.

Scope and Effect: Serves as a scientific resource for multiple, complex or high profile projects or studies.

Illustrative Examples of Work:

- provides technical support in planning and/or designing of major scientific projects, studies, or applications;
- plans schedule according to variety of methods to be used, availability of resources and number of subordinate personnel assigned to participate in project;
- performs complex scientific analyses;
- directs the development of recommendations for project solutions;
- performs peer review of scientific projects, studies, or applications and makes recommendations;
- develops technical scientific management guidelines;
- prepares peer reviewed publications or presentations;
- resolves complex project specific technical and regulatory issues;
- establishes work priorities and performance standards, hiring, training, evaluating staff, assigning and reviewing work; and
- may be responsible for technical project management to include developing the scope of work, budgeting, scheduling, reporting, implementing field projects, and approving scientific documents.
Researcher (7)

**Qualifications:** BS in applicable field + 3 years of applicable experience.

**Knowledge:** Progressive knowledge of research or engineering principles and practices.

**Supervisory Duties:** May be supervisory or non-supervisory.

**Complexity:** Provides solutions, standards, and protocol to a wide range of difficult problems.

**Scope and Effect:** Makes decisions that may have a direct effect on a program and requires independent judgment in developing recommendations.

**Illustrative Examples of Work:**
- conducts research and analysis of scientific data;
- prepares reports;
- interprets test results and comparing with determined standards and limits;
- performs site inspections and field oversight;
- identifies and evaluates scientific samples and determines need for further testing;
- planning and conducting scientific research and analyses;
- providing scientific evaluations/assessments;
- applying standard analytic and design processes and consulting with other government entities;
- researching, implementing, standardizing, and evaluating new procedures;
- maintain detailed records of results and prepares written reports acceptable to the Principal Investigator and funding agencies; and
- Establishes and maintains research related procedures or equipment.
**Senior Researcher (8)**

**Qualifications:** BS in applicable field + 5 years of applicable experience.

**Knowledge:** Extensive knowledge of research or engineering principles and practices.

**Supervisory Duties:** May be supervisory or non-supervisory.

**Complexity:** Seeks continual improvement of work practices from experience with moderate-sized projects; develops extensions to existing methods and protocols.

**Scope and Effect:** Independently evaluates, selects and applies standardized scientific or engineering procedures and techniques to assignments of moderate complexity, involving potentially conflicting design requirements, unavailability of materials or processes, etc.

**Illustrative Examples of Work:**
- manages projects of moderate size and scope;
- makes substantial contributions to determining feasibility of goals and objectives;
- identifies problems and related technical issues leading to long-term, generic solutions;
- identifies technical approach for solving problems and meeting customer/grantor needs;
- performs tasks of a larger scope and often leads specific tasks within the project scope;
- is sought out for contributions to reports and publications;
- author/co-authors papers, proposals, presentations and reports; gives invited papers;
- creates, monitors and implements effective plans;
- takes lead for scoping tasks/projects; assembles research team members;
- is recognized for technical contributions by external peer network;
- maintains external research relationships to identify and develop new funding sources; and
- makes significant contributions to technical proposal preparation and/or presentations.
**Principal Researcher (9)**

**Qualifications:** MS in applicable field + 7 years of applicable experience.

**Knowledge:** Extensive knowledge of research or engineering principles and practices.

**Supervisory Duties:** Supervises other non-faculty research and other staff and student workers.

**Complexity:** Plans and executes laboratory research. Independently applies advanced knowledge of scientific research or engineering principles and practices in broad areas of assignments and related fields. Makes decisions independently on technical problems and methods, and represents the project in conferences to resolve important questions, and to plan and coordinate work. Devises new approaches to problems encountered. Uses a wide application of complex principles, theories and concepts in the specific field, plus may have working knowledge of other related disciplines to provide solutions to a wide range of difficult problems; ensures that improvement and/or changes are implemented as specified. Works on extremely complex problems of diverse scope where analysis of situations or data requires evaluation of intangible variance factors.

**Scope and Effect:** Acts as a Principal Investigator and serves as a technical lead or consultant on various projects; leads the development of intellectual property. Exhibits creativity, foresight and mature judgment in conducting research programs/projects. Requires Research Office approval.

**Illustrative Examples of Work:**
- As an individual contributor, carries out complex or novel assignments requiring the development of new or improved research or engineering techniques and procedures;
- work is expected to result in the development of new or refined equipment, materials, processes, products, and/or scientific methods and approaches;
- in a supervisory capacity, plans, develops, coordinates, and directs a large and significant project, or a number of small projects with numerous complex features; may require the use of sophisticated project planning techniques;
- develops and evaluates plans and criteria for a variety of projects and activities to be carried out by others;
- assesses the feasibility and soundness of proposed tests, products and equipment when necessary data are insufficient or confirmation by testing is advisable.
- may perform as a staff advisor and consultant to a technical specialty, a type of facility or equipment, or a program function.
- organizes and chairs sessions at technical meetings;
- presents invited papers; primary author or key contributor on major reports, products, papers, presentations, and peer reviewed journals;
- widely recognized by key customers/grantors/investigators as being central to their mission;
- typically directs/participates in major proposal preparation and presentation; identifies sources of new contract funding and directs the preparation of proposals and presentations; plays a key role in the acquisition of research funding;
- provides intensive mentoring and training of senior research staff;
- significant involvement in external seminars, workshops, professional societies, and committees;
- develops and initiates technical standards through interactions with professional societies and key clients;