

September 27, 2002

PROCUREMENT CIRCULAR NO. 2002-07

TO: All Chief Procurement Officers
All Executive Departments

SUBJECT: Professional Services List

The purpose of this circular is to issue a revised professional services list.

1. Pursuant to Section 103D-104, HRS, definition of "Professional services" attached are two listings from the U.S. Office of Personnel Management (OPM):
 - a. The first attachment has the General Schedule (GS) series and position titles in numerical sequence within groups; and
 - b. The second attachment provides the position descriptions for the series in the same numerical sequence and groups.
2. The State's definition of "Professional services" is in Section 415A-2, HRS.

Please discontinue use of the OPM Appendix E (2 pages) and Handbook of Occupational Groups & Families (33 pages) dated January 1999 issued with Procurement Directive 1995-01, Amendment 2, dated May 30, 2000. (The Directive will be rescinded upon issue of the next Directive Index.)

Please contact either Justin Fo (586-0577) or Ruth Yamaguchi (586-0567) if your agency has any questions.

AARON S. FUJIOKA
Administrator

RJG:sk

Attach.

U.S. OFFICE OF PERSONNEL MANAGEMENT (OPM)
PROFESSIONAL SERVICES POSITIONS
FOR
CHAPTER 103D, HAWAII REVISED STATUTES

REFERENCE: SECTION 103D-104, HRS, DEFINITION OF "PROFESSIONAL SERVICES"

GENERAL SCHEDULE SERIES AND POSITION TITLES:

Miscellaneous Occupations

GS-0020 Community Planning

Social Science, Psychology, and Welfare

GS-0101 Social Science
GS-0110 Economist
GS-0130 Foreign Affairs
GS-0131 International Relations
GS-0140 Manpower Research & Analysis
GS-0150 Geography
GS-0170 History
GS-0180 Psychology
GS-0184 Sociology
GS-0185 Social Work
GS-0190 General Anthropology
GS-0193 Archaeology

Biological Sciences

GS-0401 General Biological Science
GS-0403 Microbiology
GS-0405 Pharmacology
GS-0406 Agricultural Extension
GS-0408 Ecology
GS-0410 Zoology
GS-0413 Physiology
GS-0414 Entomology
GS-0415 Toxicology
GS-0430 Botany
GS-0434 Plant Pathology
GS-0435 Plant Physiology
GS-0436 Plant Protection & Quarantine
GS-0437 Horticulture
GS-0440 Genetics

Biological Sciences (continued)

GS-0454 Range Conservation
GS-0457 Soil Conservation
GS-0460 Forestry
GS-0470 Soil Science
GS-0471 Agronomy
GS-0475 Agricultural Management
GS-0480 General Fish and Wildlife
Administration
GS-0482 Fish Biology
GS-0485 Wildlife Refuge Management
GS-0486 Wildlife Biology
GS-0487 Animal Science
GS-0493 Home Economics

Accounting and Budget

GS-0510 Accounting
GS-0511 Auditing
GS-0512 Internal Revenue Agent

Medical, Hospital, Dental, and Public Health

GS-0601 General Health Science
GS-0630 Dietician & Nutritionist
GS-0631 Occupational Therapist
GS-0633 Physical Therapist
GS-0635 Corrective Therapist
GS-0637 Manual Arts Therapist
GS-0638 Recreational/Creative Arts
Therapist
GS-0639 Educational Therapist
GS-0644 Medical Technologist
GS-0665 Speech Pathology & Audiology
GS-0690 Industrial Hygiene
GS-0696 Consumer Safety

GENERAL SCHEDULE SERIES AND POSITIONS TITLES:

Engineering and Architecture

GS-0801	General Engineering
GS-0803	Safety Engineering
GS-0804	Fire Prevention Engineering
GS-0806	Materials Engineering
GS-0807	Landscape Architecture
GS-0808	Architecture
GS-0810	Civil Engineering
GS-0819	Environmental Engineering
GS-0830	Mechanical Engineering
GS-0840	Nuclear Engineering
GS-0850	Electrical Engineering
GS-0854	Computer Engineering
GS-0855	Electronic Engineering
GS-0858	Biomedical Engineering
GS-0861	Aerospace Engineering
GS-0871	Naval Architecture
GS-0880	Mining Engineering
GS-0881	Petroleum Engineering
GS-0890	Agricultural Engineering
GS-0892	Ceramic Engineering
GS-0893	Chemical Engineering
GS-0894	Welding Engineering
GS-0896	Industrial Engineering

Information and Arts

GS-1015	Museum Curator
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Copyright, Patent, and Trade Mark

GS-1221	Patent Advisor
GS-1223	Patent Classifying
GS-1224	Patent Examining
GS-1226	Design Patent Examining

Physical Science

GS-1301	General Physical Science
GS-1306	Health Physics
GS-1310	Physics
GS-1313	Geophysics
GS-1315	Hydrology
GS-1320	Chemistry
GS-1321	Metallurgy
GS-1330	Astronomy & Space Science
GS-1340	Meteorology
GS-1350	Geology
GS-1360	Oceanography
GS-1370	Cartography
GS-1372	Geodesy
GS-1373	Land Surveying
GS-1380	Forests Products Technology
GS-1382	Food Technology
GS-1384	Textile Technology
GS-1386	Photographic Technology

Archives

GS-1420	Archivist
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Mathematics, Statistics, and Computer

GS-1510	Actuary
GS-1515	Operations Research
GS-1520	Mathematics
GS-1529	Mathematical Statistician
GS-1530	Statistician
GS-1550	Computer Science

Education

GS-1701	General Education & Training
GS-1710	Education & Vocational Training
GS-1720	Education Program
GS-1725	Public Health Educator
GS-1730	Education Research
GS-1740	Education Services
GS-1750	Instructional Systems

U.S. OFFICE OF PERSONNEL MANAGEMENT (OPM)
DESCRIPTIONS
FOR
PROFESSIONAL SERVICES POSITIONS

MISCELLANEOUS OCCUPATIONS

GS-0020 . Community Planning

This series includes professional positions concerned with community planning and with developing the art and science of planning to apply to communities such as urban or rural neighborhoods, villages, Indian reservations, cities, counties, regions, States, or the nation. Community planning work requires knowledge of planning concepts, principles, techniques, and practices; the social, economic, political, and physical elements involved in human settlements; and the dynamics of change within these elements. Planners identify community needs, resources, and problems, and assist citizens to make decisions on goals, policies, priorities, plans, programs, and methods of implementation designed to create a physical, economic, and social environment in which the human activities desired by the members of the community may flourish.

SOCIAL SCIENCE, PSYCHOLOGY, AND WELFARE

GS-0101 . Social Science

This series includes positions the duties of which are to advise on, administer, supervise or perform research or other professional and scientific work in one or any combination of the social sciences when such work is not classifiable in other series of this occupational group.

GS-0110 . Economist

This series includes positions which require application of a professional knowledge of economics in the performance of duties that include: research into economic phenomena, analysis of economic data, and the preparation of interpretive reports; advice and consultation on economic matters to governmental officials and private organizations or citizens; and the performance of other professional work in economics including supervision and the direction of economists engaged in the various economics programs of the Federal Government.

GS-0130 . Foreign Affairs

This series includes all classes of positions the duties of which are to advise on, administer, supervise, or perform research or other professional and scientific work in the departmental formulation and direction of the foreign affairs of the Government or in the study and disposition of information bearing on international relations.

GS-0131 - International Relations

This series includes all classes of positions the duties of which are to advise on, administer, supervise, or perform professional work in the formulation and implementation of foreign policy of the United States in the conduct of the relations, primarily of a political or politico-economic nature, of the United States with other governments.

GS-0140 - Manpower Research and Analysis

This series includes positions involving the performance of professional work in manpower research or in manpower programs development and evaluation for the purpose of furthering the development and utilization of the nation's manpower resources. Such work requires the application of concepts, principles and practices of sociology, psychology, economics, and/or allied social sciences in implementing national programs designed to equip the underemployed, the persistently unemployed and other unemployed with necessary skills to provide an opportunity for their full participation and utilization in the labor force; to increase the general employability of unemployed youth; to aid school dropouts or potential dropouts in continuing or resuming their education; and to insure sufficient availability of needed manpower and occupational skills.

GS-0150 - Geography

This series includes positions the duties of which involve professional work in the field of geography, including the compilation, synthesis, analysis, interpretation and presentation of information regarding the location, distribution, and interrelationships of and processes of change affecting such natural and human phenomena as the physical features of the earth, climate, plant and animal life, and man's settlements and institutions.

GS-0170 - History

This series includes positions the duties of which are to advise on, administer, supervise or perform research or other work in the field of history when such work requires a professional knowledge of established methods and techniques of historical research in the collection, evaluation, analysis or presentation of historical facts.

GS-0180 - Psychology

This series includes positions involving professional work relating to the behavior, capacities, traits, interests and activities of human and animal organisms. This work may involve any one or a combination of the following functions: (1) experimenting with or systematically observing organisms to develop scientific principles or laws concerning the relationship of behavior to factors of environment, experience, or physiology, or to develop practical applications of findings; (2) applying professional knowledge of psychological principles, theories, methods, or data to practical situations

and problems; and (3) providing consultative services or training in psychological principles, theories, methods, and techniques to advance knowledge of them and their appropriate use.

GS-0184 -Sociology

This series includes positions, which involve professional work requiring knowledge of sociology, and sociological methods specifically related to the establishment, validation, interpretation, and application of knowledge about social processes. Sociologists study specialized areas such as: changes in the character, size, distribution, and composition of the population; social mechanisms for enforcing compliance with widely accepted norms and for controlling deviance; social phenomena having to do with human health and disease; the structure and operation of organizations; and the complex interrelationship of the individual and society. Sociologists are concerned primarily with the study of patterns of group and organizational behavior, social interaction, and social situations in which interaction occur. The emphasis is on the patterns of behavior that are characteristic of social groups, organizations, institutions, and nations. Some sociologists perform sociological research, others apply sociological principles and findings, and some perform a combination of both kinds of work.

GS-0185 -Social Work

This series includes positions, which require application of a professional knowledge of the principles and practices of social work in the performance of such assignments as providing direct services to individuals and families, including work with individuals in-groups. Also included are positions concerned with teaching social work, doing research on social work problems, training of social work students, and providing consultation and advice to members of related professions and community organizations on social work questions.

GS-0190 -General Anthropology

This series includes all classes of positions the duties of which are to advise on, supervise or perform research or other professional and scientific work in the anthropological sciences except archeology. This work may be specialized in one or several of the branches of the scientific field, which includes ethnology, physical anthropology, and scientific linguistics.

GS-0193 -Archeology

This series includes positions that involve professional work in archeology, the scientific study of past human activities through the physical remains of life and past human activities. The work may include research, field investigations, laboratory analysis, library research, interpretation or consultative work, preparation of reports for publication, curation and exhibition of collections, or development and implementation of programs and projects, which carry out such work. Such work requires knowledge of professional archeological principles, theories, concepts, methods, and techniques.

BIOLOGICAL SCIENCES

GS-0401 - General Biological Science

This series includes positions, which involve professional work in biology, agriculture, or related natural resource management when there is no other more appropriate series. Thus included in this series are positions that involve (1) a combination of several professional fields with none predominant, or (2) a specialized professional field not readily identified with other existing series.

GS-0403 - Microbiology

This series includes all classes of positions the duties of which involve the performance of scientific and professional work in the field of microbiology. Microbiology deals with the study of the characteristics and life processes of microorganisms, the interrelationships among microorganisms, their relationships to other living forms, and their reactions to the environment in which they are found. This includes (1) work with the protozoa, bacteria, algae, fungi, viruses, rickettsiae, microscopic parasites and similar microscopic and submicroscopic forms; (2) work in such fields as immunology, medical parasitology, physiology, serology, genetics, taxonomy, and cytology as they relate to microorganisms; (3) studies of the form, structure, reproductive processes, genetics, taxonomy, and cytology as they relate to microorganisms and the products of their chemical activities; (4) studies of the distribution of microorganisms in natural and manmade environments (including agricultural and nonagricultural products and food processing establishments), their reaction to physical and chemical factors in the environment, their role as pathogenic and immunizing agents, and their isolation, cultivation, identification, and systematic classification; and (5) work which involves the development of scientific microbiological methods, procedures, and techniques, and the production and use of microorganisms in agricultural, industrial, medical, sanitary, and other practical applications.

GS-0405 - Pharmacology

This series includes positions the duties of which are primarily to administer, advise on, supervise, or perform research, analytical, advisory, or other professional and scientific work in the discipline of pharmacology. Such work requires the application of knowledge of the history, sources, physical and chemical properties, biochemical, toxic, and physiological effects, mechanisms of action, absorption, distribution, metabolism, biotransformation and excretion, and therapeutic and other uses of drugs. Pharmacology 1) involves the many aspects of the action of drugs or similar agents on living systems and their constituent parts, ranging from the intermolecular reactions of chemical compounds in a cell with drugs, to the evaluation of the effectiveness of a drug or agent in the treatment of human disease; and (2) requires intensive preparation and training in organic chemistry, biochemistry, physiology, and pharmacology; the application and interpretation of a full range of methods, procedures, and techniques

relative to the action of drugs or similar agents, but does not require full professional training in medicine or veterinary medicine.

GS-0406 Agricultural Extension

This series includes all classes of positions the duties of which are to advise on, administer, supervise, or perform research or other professional and scientific work in connection with extension and instruction projects in some phase of agricultural or home economics.

GS-0408 Ecology

This series includes positions that involve primarily advisory, research, analytical, or other professional work in the science of ecology.. Ecology utilizes a systems approach to study the interrelationships of organisms with each other, with their physical and chemical environment, and with society. Such relationships are considered primarily at the levels of individuals, populations, communities, and ecosystems. Ecologists analyze biological components and processes in the context of ecosystems including environmental factors, physical-chemical relationships, and social relationships. They use quantitative and systems analysis techniques to predict effects of planned or natural changes in ecosystems and to develop understanding of and solutions to ecological problems.

GS-0410 Zoology

This series includes positions, which involve work in the field of zoology, including classification, structure, ecology, parasitological phenomena, evolution and the life history of animals. This work requires professional education and training in the animal and related natural sciences, and knowledge of the principles, methods, techniques, and procedures applied in the investigation, and solution of zoological problems.

GS-0413 Physiology Series

This series includes all classes of positions the duties of which are to advise on, administer, supervise, or perform research or other professional and scientific work in the field of human and animal physiology, including studies of the functions, environmental response, and biological activities and processes of the basic living organism and its component parts.

GS-0414 Entomology

This series includes positions the duties of which are to advise on, administer, supervise, or perform professional and scientific work in the field of entomology which requires a fundamental knowledge of the principles of the biological and physical sciences which underlie the field, and a specific knowledge of the application of these principles to the solution of entomological problems.

GS-0415 Toxicology

This series includes positions the duties of which are primarily to administer, advise on, supervise, or perform research, analytical, advisory, or other professional and scientific work in the discipline of toxicology. Such work involves the study of adverse effects of chemical substances or similar agents on living organisms and/or the environment, and the assessment of the probability of their occurrence under specified conditions of use or exposure. Toxicology (1) involves the study of the interaction of chemical and physical agents and biological systems, the exploration of the nature and mechanisms of adverse reactions, and the assessment of the likelihood that adverse effects will occur; and (2) requires the application of scientific knowledge including, but not limited to, pathology, anatomy, chemistry, biochemistry, microbiology, physiology, pharmacology, toxicology, and materials sciences (e.g., as they pertain to the interrelationships of composition, structure, and properties), but does not require full preparation for practice in any one of those disciplines, or full professional training in medicine or veterinary medicine.

GS-0430 Botany

This series includes positions which involve research or other professional scientific work in the field of botany, including plant taxonomy, morphology, ecology, and ethnobotany. This work requires full professional education and training in the plant sciences and a fundamental knowledge of the principles, methods, techniques, procedures, and relationships of the science of botany and of the application of this knowledge in the investigation, analysis, and solution of botanical problems.

GS-0434 Plant Pathology

This series includes all classes of positions the duties of which are to advise on, administer, supervise, or perform research or other professional and scientific work in the investigation of the cause, nature, prevalence, and severity of parasitic, nonparasitic, and virus diseases attacking plants; experimentation in and the establishment of methods for the prevention and control of such diseases; or the relation of such diseases to practices involved in the propagation, planting, cultivation, transportation, and storage of plants and plant products; or any combination thereof.

GS-0435 Plant Physiology

This series includes positions, which involve research or other professional and scientific work pertaining to one or more of such vital functions as plant growth, nutrition, respiration, and reproduction that are essential to the life of the plant or its use. This includes work on the internal processes such as assimilation, photosynthesis, translocation, or transpiration that are involved in vital functions; or on the influence which one or more environmental factors, such as humidity, water, light, mineral nutrients, and temperature have on these functions and processes.

GS-0436 - Plant Protection and Quarantine

This series includes all classes of positions the duties of which are to advise on, administer, supervise, and perform professional and scientific work in the establishment and enforcement of agricultural quarantines governing movement of plant pests of economic significance into or within the United States, and in the survey, detection, regulation, and control or eradication of plant pests. These duties require the application of professional training and knowledge in one or more of the biological and agricultural sciences such as plant pathology, entomology, nematology, horticulture and related sciences. Most positions also require practical knowledge of the transportation and shipping industries; farming, nursery and related operations, and inspection, quarantine and control techniques as applied to plants, plant products, animal byproducts and other items of agricultural quarantine interest.

GS-0437 - Horticulture

This series includes all classes of positions the duties of which are to advise on, administer, supervise, or perform research or other professional and scientific work in the behavior, breeding, or culture (or any combination thereof) of fruits, vegetables, flowers, or ornamental trees and shrubs, and in allied problems of their production, storage, and handling.

GS-0440 - Genetics

This series includes all classes of positions the duties of which are to advise on, administer, supervise, or perform professional research in the principles and mechanisms of transmission of characters by inheritance, including in some instances the application of these principles in planning breeding programs.

GS-0454 - Rangeland Conservation

This series covers positions that require primarily professional knowledge and competence in rangeland management to perform work involving the preservation, development, and management of rangelands. This includes the ability to analyze and protect the natural resources, to develop programs and standards for rangeland use and conservation, and to advise State officials, and private and Indian landowners in rangeland management practices.

GS-0457 - Soil Conservation

This series includes positions involving the performance of professional work in the conservation of soil, water, and related environmental resources to achieve sound land use. Conservation work requires knowledge of (1) soils and crops; and (2) the pertinent elements of agronomy, engineering, hydrology, range conservation, biology, and forestry; and (3) skill in oral and written communication methods and techniques sufficient to impart these knowledge to selected client groups.

GS-0460 -Forestry

This series includes positions, which require primarily professional knowledge and competence in forestry science. The work includes development, production, conservation, and utilization of the natural resources of forests and associated lands; the inventory, planning, evaluation, and management of each forest resource including timber, soil, land, water, wildlife and fish habitat, minerals, forage, and outdoor recreation including wilderness, in relationship with each other to meet both present and future public and local private needs and demands; the protection of resources against fire, insects, disease, floods, erosion, and other depredations; the valuation, management and protection of forest lands and properties; the interpretation and communication of principles, facts and legislation upon which the management of forest land rests; and the development of new, improved, or more economic scientific methods, practices, or techniques necessary to perform such work.

GS-0470 -Soil Science

This series includes positions, which involve professional and scientific work in the investigation of soils, their management, and their adaptation for alternative uses. Such work requires knowledge of chemical, physical, mineralogical and biological properties and processes of the soils and their relationships to climatic, physiographic, and biologic influences.

GS-0471 -Agronomy

This series includes all classes of positions the duties of which involve the performance of professional and scientific work in the field of agronomy, including the application of the fundamental principles of the plant, soil, and related sciences, (and those affecting the water relationships involved) to the improvement, production, management, and utilization of field crops, pasture and cover crops, turf, and related types of vegetation; to soil and crop management; to the development and use of weed controls and plant regulators; and to related fields.

GS-0475 -Agricultural Management

This series includes positions involving performance of a broad range of professional agricultural functions associated with providing supervised credit and technical assistance programs for agricultural enterprises and related rural activities. The work requires performance of broad technical and financial functions to assist farmers, ranchers, and other rural residents in the planning, development, operations, and maintenance of agricultural enterprises. Positions in this series perform duties such as: advising farmers and ranchers of the operational and financial implications of key decisions concerning their enterprises; determining the survivability of agricultural enterprises; approving and supervising loans under various programs; and verifying information supplied by borrowers. Positions in this series require: professional knowledge of agriculture and related biological and physical sciences; knowledge of credit and finance principles and practices; and knowledge of the purposes, provisions,

procedures, and implications of the various loan programs of the agency.

GS-0480 -General Fish and Wildlife Administration

This series includes all classes of positions which involve professional and scientific work in administering, directing, or exercising administrative and technical control over programs, regulatory activities, projects, or operations which are concerned with the conservation and management of fishery resources, wildlife resources, or fish and wildlife resources.

GS-0482 -Fishery Biology

This series includes positions which require professional knowledge and competence in the science of fishery biology to perform work: (1) developing, conserving, managing, and administering fishery resources; and (2) evaluating the impact of construction projects and other socioeconomic activities that present potential or actual adverse effects on fishery resources and their habitat. The work also requires an ability to determine, establish, and apply biological facts, principles, methods, techniques, and procedures that are necessary for the production and/or management of aquatic resources in their natural habitat and/or within facilities and systems that have been constructed for their benefit and public use.

GS-0485 -Wildlife Refuge Management

This series includes positions, which require primarily professional knowledge and competence in the management, administration, and scientific operation of public lands and waters designated as national wildlife refuges. The work requires biological analyses, planning, and evaluation, and has as its principal purpose the conservation, protection, and propagation of wildlife species and the manipulation and utilization of their required habitat. The work involves a variety of activities in land, water, and habitat management, land planning, resource identification and allocation, administration, public relations, supervision, and other activities involving wildlife resource utilization, protection, inventory and evaluation, and maintenance of grasslands, marshes, and soils. The work also involves management considerations of land exploration and public, commercial, industrial, and agrarian land use.

GS-0486 -Wildlife Biology

This series includes positions which require professional knowledge and competence in the science of wildlife biology to perform work involving: (1) the conservation, propagation, management, protection, and administration of wildlife species; or (2) the determination, establishment, and application of biological facts, principles, methods, techniques, and procedures necessary for the conservation and management of wildlife resources and habitats. The work requires professional knowledge of the distribution, habits, life histories, and classification of birds, mammals, and other forms of wildlife.

GS-0487 -Animal Science

This series includes positions that involve research or other professional and scientific work in the field of animal science including nutritional, biophysical, biochemical, and physiological relationships. This work requires full professional education and training in the biological and agricultural sciences and a fundamental knowledge of the principles, methods, techniques, and relationships in the field of animal science and the application of this knowledge in the investigation, analysis, and solution of animal science problems.

GS-0493 -Home Economics

This series includes all positions that require application of professional knowledge of home economics pertaining to foods and nutrition, selection and use of household equipment, textiles, clothing and other products used in family care and household management practices.

ACCOUNTING AND BUDGET

GS-0510 -Accounting

This series includes all positions the duties of which are to advise on or administer, supervise, or perform professional accounting work relating to the financial activities of governmental, quasi-governmental, or private sector organizations. The work includes the design, development, operation, or inspection of accounting systems; the prescription of accounting standards, policies, and requirements; the examination, analysis, and interpretation of accounting data, records, or reports; or the provision of accounting or financial management advice and assistance to management.

GS-0511 --Auditing

This series includes all positions the duties of which are to advise on, supervise, or perform work consisting of a systematic examination and appraisal of financial records, financial and management reports, management controls, policies and practices affecting or reflecting the financial condition and operating results of an activity; or analytical work related to the development and execution of audit policies and programs when such work requires the application of professional accounting knowledge, standards, and principles.

GS-0512 -Internal Revenue Agent

This series includes all positions the duties of which are to administer, supervise, or perform work involved in determining, redetermining, and advising on liability for Federal taxes when such work requires a knowledge of professional accounting, and in addition, a knowledge of pertinent tax laws, regulations, procedures, and related matters.

MEDICAL, HOSPITAL, DENTAL, AND PUBLIC HEALTH

GS-0601 - General Health Science

This series includes positions which involve research or other professional and scientific work which is specifically health-oriented in character, when the work is of such generalized or miscellaneous specialized nature that the positions are not more appropriately classifiable in any of the existing series in this or any other Group. The work requires a background of knowledge, skills and techniques gained from professional training in a health science or allied scientific field, but has no paramount, rigid or continuing requirement for the knowledge, skills and techniques characterizing any of the established series which reflect one or more of the academic disciplines or recognized professions. Such work may cut across and require understanding of scientific methods and techniques common to several recognized professional fields in the health, medical or allied sciences (e.g., work in the field of health research administration requiring knowledge of research methodology common to a number of different scientific fields); and/or the work may represent a new, emerging or miscellaneous professional occupational area of a health science not readily identifiable with established series. This series is not intended for use for interdisciplinary professional positions (and the paramount qualification needed to perform in the work) which are readily identifiable with existing series.

GS-0630 - Dietitian and Nutritionist

This series includes positions that advise on, administer, supervise, or perform work in human nutrition requiring the application of professional knowledge of dietetics or nutrition directed toward the maintenance and improvement of human health.

Dietetics is an essential component of the health sciences, usually with emphasis on providing patient care services in hospitals or other treatment facilities. The work of the dietitian includes food service management, assessing nutritional needs of individuals or community groups, developing therapeutic diet plans, teaching the effects of nutrition on health, conducting research regarding the use of diet in the treatment of disease, or consulting on or administering a dietetic program.

Nutrition is the science of food and nutrients, their uses, processes, and balance in relation to health and disease. The work of nutritionists emphasizes the social economic, cultural, and psychological implications of food usually associated with public health care services or with food assistance and research activities. The work includes directing, promoting, and evaluating nutritional components of programs and projects; developing standards, guides, educational and informational material for use in Federally or operated nutrition programs; participating in research activities involving applied or basic research; or providing training and consultation on nutrition.

GS-0631 -Occupational Therapist

This series includes positions requiring professional knowledge of the concepts, principles and practices of occupational therapy to provide clinical services, supervise or train students and therapist, or perform research with people who have impaired capacities for performing activities appropriate to their age group. The work requires knowledge of the structure and function of the human body, environmental influences, human development, physical and psychosocial dysfunctions, and skill in developing treatment plans to teach new skills, restore performance, or learn compensating skills.

GS-0633 -Physical Therapist

This series includes positions, which involve professional work requiring the application of knowledge of the concepts, principles, and practices of physical therapy for the treatment or prevention of physical disability or disease. Physical therapists plan and carry out treatment utilizing therapeutic exercise, massage, and physical agents such as air, water, electricity, sound, and radiant energy. Therapists perform tests and measurements involving manual or electrical means; and interpret results. Therapists also devise adaptations of equipment to meet the specific needs of patients.

GS-0635 -Corrective Therapist

This series includes positions, which involve professional work requiring the application of knowledge of the concepts, principles, and practices of physical education and rehabilitation therapy, using physical exercise to maintain the health or to achieve physical or mental rehabilitation of patients. Corrective therapists plan and carry out treatment in which they use or adapt various types of physical exercise, physical activities, and equipment. They evaluate patients for muscle strength, endurance, coordination, and balance; provide individual or group instruction for physical reconditioning or for resocialization of patients; and devise adaptations of equipment to meet the specific needs of patients.

GS-0637 -Manual Arts Therapist

This series includes positions that involve professional work requiring the application of knowledge of the concepts, principles, and practices of industrial arts education and rehabilitation therapy to plan and carry out treatment for the physical or mental rehabilitation of patients. Manual arts therapists evaluate vocational potential of patients; devise projects and equipment to maintain or improve skills of patients and promote recovery; and evaluate patient's ability to work in an actual or simulated work environment. Some manual arts therapists participate in the rehabilitation of blind patients.

GS-0638 -Recreation/Creative Arts Therapist

This series includes positions which involve professional work requiring application of either (1) a knowledge of the concepts, principles, and practices of recreation therapy,

and the use of recreational modalities; or (2) a knowledge of the concepts, principles, and practices of a specialized creative arts therapy field (i.e., art, dance, music, and psychodrama) and the use of appropriate specialized activity modalities to maintain the physical and/or mental health or to achieve the physical and or mental rehabilitation of patients. These therapists evaluate the history, interests, aptitudes, and skills of patients by interviews, inventories, tests, and measurements, and use such findings, along with medical records and the therapy orders of physicians or nurses, to develop and implement therapy activities for individual patients. These several therapy approaches are directed toward achieving such therapeutic objectives as diminishing emotional stress of patients, providing a sense of achievement, channeling energies and interests into acceptable forms of behavior, aiding physical and mental rehabilitation, and promoting successful community reentry.

GS-0639 Educational Therapist

This series includes positions that involve professional work requiring the application of knowledge of the concepts, principles, and practices of education and rehabilitation therapy. Educational therapists plan and carry out treatment, which involves the use of educational situations, equipment, and methods to rehabilitate patients. They evaluate the learning ability or educational level of patients by use of educational tests and measurements. Some educational therapists participate in the rehabilitation of blind patients. The activities of educational therapists are directed to achieving therapeutic objectives such as diminishing emotional stress of a patient, providing a sense of achievement, and channeling energies into acceptable forms of behavior.

GS-0644 Medical Technologist

This series includes positions that require professional knowledge and competence in the field of medical technology. Medical technology involves performing, advising on, or supervising clinical laboratory testing of human blood, urine, and other body fluids or tissues, using manual or automated techniques; confirming test results and developing data which may be used by physicians in determining the presence and extent of disease or in support of medical research; modifying or designing laboratory procedures; establishing and monitoring quality control systems and measures; and providing instruction in the basic theory, technical skills, and application of laboratory test procedures. Medical technology includes work in such areas as hematology, bacteriology, mycology, virology, parasitology, immunology, serology, immunohematology (blood banking), clinical chemistry (including endocrinology and toxicology), and urinalysis as they relate to clinical laboratory practice.

GS-0665 Speech Pathology and Audiology

This series covers positions involving professional work in the study and/or treatment of human communications disorders, as reflected in impaired hearing, voice, language, or speech. The work requires professional knowledge of the nature of these disorders, their causes, and methods of therapeutic treatment. The work involves any one or a combination of the following functions: (1) providing direct clinical services in the

evaluation and resolution of communications disorders; (2) providing graduate level training in communications disorders; (3) planning and administering a comprehensive program for evaluating and treating communications disorders; and (4) planning, administering, and performing laboratory and clinical research in communications disorders.

GS-0690 -Industrial Hygiene

This series includes all classes of positions the duties of which are to advise on, administer, supervise, manage, or perform professional and scientific work in industrial hygiene, including the identification and evaluation of conditions affecting the health and efficiency of employees, or the citizens of the adjacent community, the formulation and recommendation of measures to eliminate or control occupational health hazards, and the promotion of occupational health programs for instructing and motivating managers and employees in the prevention as well as correction of potential health hazards.

GS-0696 -Consumer Safety

This series includes professional positions concerned with enforcing the laws and regulations protecting consumers from foods, drugs, cosmetics, fabrics, toys, and household products and equipment that are impure, unwholesome, ineffective, improperly or deceptively labeled or packaged, or in some other way dangerous or defective. These positions require knowledge of various scientific fields such as chemistry, biology, pharmacology, and food technology. Consumer safety officers identify substances and sources of adulteration and contamination, and evaluate manufacturing practices, production processes, quality control systems, laboratory analyses, and clinical investigation programs.

GS-0800 -ENGINEERING AND ARCHITECTURE

GS-0801 -General Engineering Series

This series includes all classes of positions the duties of which are to advise on, administer, supervise, or perform research or other professional and scientific work of a special or miscellaneous character which is not specifically classifiable in any other engineering series, but which involves the application of a knowledge of such engineering fundamentals as the strength and strain analysis of engineering materials and structures, the physical and chemical characteristics of engineering materials such as elastic limits, maximum unit stresses, coefficients of expansion, workability, hardness, tendency to fatigue, resistance to corrosion, engineering adaptability, engineering methods of construction and processing, etc.; or positions involving professional work in several branches of engineering.

GS-0803 - Safety Engineering

This series includes positions that require the performance of professional engineering work to eliminate or control hazardous conditions resulting from human error, equipment and machine operations, which may lead to injury to persons and damage to property. The work requires the application of: (1) advanced mathematical techniques; (2) professional engineering principles, methods, and techniques; (3) safety related elements of the physical sciences, ergonomics, psychology and physiology; and (4) safety principles, standards, practices, and analytical techniques.

GS-0804 - Fire Protection Engineering

This series includes all classes of positions the duties of which are to advise on, administer, supervise, or perform research or other professional and scientific work in the investigation or development of fire prevention projects, the design, construction, inspection, testing, operation, or maintenance of fire fighting or fire prevention apparatus, appliances, devices and systems, or the testing of fire resistant materials.

GS-0806 - Materials Engineering

This series includes professional positions in engineering, or in engineering and physical science, which are concerned primarily with the properties, processing, uses, and inservice behavior of engineering materials, where the work performed and the qualifications required are such that the position is not more characteristic of a series appropriate to some other academic discipline. The work is characterized by the following three qualification requirements: (1) a highly developed knowledge of materials and their properties, processing, uses, and behavior under environmental influences; (2) an understanding of and the ability to utilize advances of the fundamental materials sciences, e.g., as they pertain to the interrelationships of composition, structure, and properties; and (3) knowledge of and ability to apply pertinent engineering principles and practices including considerations such as cost, availability, fabrication, performance, and use.

GS-0807 - Landscape Architecture

This series includes positions the duties of which are to perform or supervise professional work in the planning and design of land areas and concurrent landscape construction and maintenance for integrated developments to meet specific human needs. It involves the analysis of land characteristics, operational requirements, land use intensities, and commensurate land values and includes the efficient correlation of ground and water forms, plant forms, structures, roads, and walks to serve esthetic, functional, economic, and other interrelated purposes. Positions in this series require professional landscape architectural planning and design ability and require knowledge of the allied physical planning fields of architectural and civil engineering, and the biological sciences of agronomy, plant ecology, horticulture, and botany as they affect land development.

GS-0808 -Architecture

This series includes positions the duties of which involve professional architectural work which typically requires: (1) knowledge of architectural principles, theories, concepts, methods, and techniques; (2) a creative and artistic sense; and (3) an understanding and skill to use pertinent aspects of the construction industry, engineering and the physical sciences related to the design and construction of new or the improvement of existing buildings.

GS-0810 -Civil Engineering

This series included professional positions in the field of civil engineering, typically requiring application of general knowledge of the physical sciences and mathematics underlying engineering, and specialized knowledge of (1) mechanics of solids, particularly of soils, (2) hydraulics, (3) theory of structure, (4) strength of materials, (5) engineering geology, and (6) surveying. Positions in this series have responsibility for management, supervision or performance of (1) planning, designing, constructing, and/or maintaining structures and facilities that provide shelter, support transportation systems, and control natural resources; (2) investigating, measuring, surveying and mapping the earth's physical features and phenomena; and (3) research and development activities pertaining to (1) or (2).

GS-0819 -Environmental Engineering

This series includes positions that involve professional engineering work to protect or improve air, land, and water resources in order to provide a clean and healthful environment. Such work requires the application of (1) professional knowledge of the principles, methods, and techniques of engineering concerned with facilities and systems for controlling pollution and protecting quality of resources and the environment, and (2) an understanding of and the ability to utilize pertinent aspects of chemistry, biological sciences, and public health that pertain to the control or elimination of pollutants.

GS-0830 -Mechanical Engineering

This series includes professional positions in the field of mechanical engineering typically requiring the application of thermodynamics, mechanics, and other physical, mathematical and engineering sciences to problems concerned with the production, transmission, measurement, and use of energy, especially heat and mechanical power.

GS-0840 -Nuclear Engineering

This series includes positions that involve professional engineering work which is concerned primarily with the engineering principles and considerations relating to the atomic nucleus and the systems, processes, and materials required for the generation, controlled release, and utilization of nuclear energy. Nuclear engineering work requires the application of professional engineering knowledge in the research, development,

design, construction, testing, installation, monitoring, operation and maintenance of nuclear reactors (fission or fusion) and other nuclear systems and immediate auxiliary or ancillary systems and equipment.

GS-0850 -Electrical Engineering

This series includes professional engineering positions which require primarily application of knowledge of (1) the physical and engineering sciences and mathematics, (2) electrical phenomena, and (3) the principles, techniques, and practices of electrical engineering. The work pertains primarily to electrical circuits, circuit elements, equipment, systems, and associated phenomena concerned with electrical energy for purposes such as motive power, heating, illumination, chemical processes, or the production of localized electric or magnetic fields.

GS-0854 -Computer Engineering

This series includes professional engineering positions which require primarily the application of knowledge of (1) fundamentals and principles of professional engineering, (2) computer hardware, systems software, and computer system architecture and integration, and (3) mathematics, including calculus, probability, statistics, discrete structures, and modern algebra. The work pertains primarily to the research, design, development, testing, evaluation, and maintenance of computer hardware and software systems in an integrated manner.

GS-0855 -Electronics Engineering

This series includes professional engineering positions which require primarily application of knowledge of (1) the physical and engineering sciences and mathematics, (2) electronic phenomena, and (3) the principles, techniques, and practices of electronics engineering. The work pertains primarily to electronic circuits, Circuit elements, equipment, systems, and associated phenomena concerned with electromagnetic or acoustical wave energy or electrical information for purposes such as communication, computation, sensing, control, measurement, and navigation.

GS-0858 -Biomedical Engineering

This series includes positions that involve professional work in biomedical engineering. The work requires the application of engineering concepts and methodology to investigate problems and phenomena of living systems to advance the understanding of these systems and improve medical practices; to develop materials, instruments, diagnostic and therapeutic devices, and other equipment applicable in the study of life systems and the practice of medicine; and to improve health service delivery systems for communities and within individual institutional components (hospitals, clinics, or other activities). Biomedical engineering work requires in addition to knowledge and skill in engineering disciplines a background in physiology and anatomy, and a practical facility in specialized subject matter areas such as computer applications, electronics, or mathematics.

GS-0861 -Aerospace Engineering

This series includes professional aerospace engineering positions involved in planning, research, development, design, test and evaluation, analysis, production, fabrication, operation, type certification, and/or maintenance of aerospace vehicles or integrally associated equipment. It also includes positions involved in investigating phenomena encountered in aerospace flight, monitoring and analyzing unknown or unfamiliar aerospace vehicles, piloting aerospace vehicles, developing aviation safety standards and regulations, and positions providing staff leadership and guidance related to aerospace engineering programs. The work requires application of scientific and engineering principles in the field of aeronautics and astronautics, such as aerodynamics, aeroacoustics, astrodynamics, computational fluid dynamics, fluid mechanics, flight dynamics, flight structures, thermodynamics, flight propulsion, and energy conversion and use.

GS-0871 -Naval Architecture

This series includes all classes of positions the duties of which are to advise on, administer, supervise, or perform professional engineering work in the field of naval architecture, which primarily concerns the form, strength, stability, performance, and operational characteristics of ships. The work of positions in this series includes research, design, development, construction, investigation, testing, arrangement, installation, and maintenance for all types of ships. This work involves the consideration and application of naval architectural principles and concepts; the making of stability and buoyancy calculations and developing data for launching, loading, operation, and dry-docking of ships in a safe, efficient, and economical manner; and naval architectural investigations and development of data and criteria leading to improved ship design includes in combination (1) the preparation of specifications, including estimates of labor and material costs to cover work determined to be necessary as a result of surveys, (2) the inspection and acceptance of the work accomplished to place the vessel in the condition specified, and (3) other work, such as preparation of reports, incidental to ship surveying. This series does not include work primarily concerned with inspection of the construction, assembly, modification, conversion, overhaul, or repair of vessels or inspections involved in the procurement of vessels, chiefly to assure compliance with contracts, plans, and specifications.

GS-0880 -Mining Engineering

This series includes positions that require primarily the application of professional knowledge of mining engineering. The work requires the ability to apply the principles of mathematics, chemistry, geology, physics, and engineering to mining technology. It also requires general knowledge of construction and excavation methods, materials handling, and the processes involved in preparing mined materials for use. Mining engineer positions are concerned with the search for, efficient removal, and transportation of ore to the point of use; conservation and development of mineral lands, materials, and deposits; and the health and safety of mine workers.

GS-0881 -Petroleum Engineering

This series includes positions that require primarily the application of a professional knowledge of petroleum engineering. The work is concerned with exploration and development of oil and natural gas fields; production, transportation, and storage of petroleum, natural gas, and helium; investigation, evaluation, and conservation of these resources; regulation of transportation and sale of natural gas; valuation of production and distribution facilities for tax, regulatory, and other purposes; and research on criteria, principles, methods, and equipment.

GS-0890 -Agricultural Engineering

This series includes professional positions that require primarily the application of the principles of engineering in combination with knowledge of one or more fields of agriculture. The work involves research, development, design, test, evaluation, and application of the fundamentals of engineering to aid in the solution of agricultural problems in such areas as farm structures, soil and water conservation, mechanical power and machinery, and electric power and processing.

GS-0892 -Ceramic Engineering

This series includes professional engineering positions concerned with the development or adaptation of materials, methods, and processes used in the manufacture of ceramic products; and with the design, construction and operation of industrial processes and equipment used in their production. Ceramic products may be considered as those composed of nonmetallic, inorganic minerals which are subjected to high temperature during manufacture or use; and include crystalline materials with desired physical properties, cementitious materials, abrasives, refractories, porcelain enamels, structural clay products, whiteware, and glass products.

GS-0893 -Chemical Engineering

This series includes positions that involve professional work in chemical engineering, including research, development, design, operation, evaluation, and improvement of processes, plants, equipment, methods, or products. The work involves changes in the chemical composition or physical state of materials and requires primarily application of knowledge of the principles and practices of chemical engineering, chemistry, and other scientific and engineering disciplines.

GS-0894 -Welding Engineering

This series includes all classes of positions the duties of which are to administer, supervise, advise on, coordinate, or perform engineering research or other professional engineering work involving the application of welding and engineering principles to the solution of problems in the development and improvement of welding equipment and processes, the design of welding sequences and welded structures, the establishment

and maintenance of standards and quality controls for welding, the giving of advice to design and construction engineers on the production applicability of welding, and similar work regarding metallic joining or cutting processes allied to welding.

GS-0896 Industrial Engineering

This series includes positions that involve professional work in industrial engineering. Industrial engineering is that branch of engineering concerned with the planning, design, analysis, improvement, and installation of integrated systems of employees, materials, and equipment to produce a product or render a service. The work requires application of specialized professional knowledge and skill in the mathematical, physical, and social sciences together with the principles and methods of engineering analysis and design to specify, predict, and evaluate the results to be obtained from such systems.

GS-1000 INFORMATION AND ARTS

GS-1015 Museum Curator

This series includes all classes of positions the primary duties of which are to administer, supervise, or perform professional work related to research, collections and exhibits in Federal museums, when such work is not classifiable in other professional, scientific, or historical series.

GS-1200 COPYRIGHT, PATENT, AND TRADEMARK

GS-1221 Patent Adviser

This series includes positions involving professional, scientific or engineering work and, in addition, legal work pertaining to the analysis of inventions and the evaluation of the patentability thereof. This entails preparing and prosecuting applications for patents; preparing and presenting briefs and arguments and prosecuting appeals and interferences before the Patent Office; making infringement investigations, and rendering opinions on the validity of patents, in order to protect the Government's interest in such inventions.

GS-1223 Patent Classifying

This series includes all professional, scientific, and technical positions which are primarily concerned with developing and/or administering systems for the classification, for patent purposes, of the technological knowledge embodied in United States patents and related material.

GS-1224 Patent Examining

This series includes all classes of positions the duties of which are to advise on, administer, supervise, or perform professional, scientific, technological, and legal work

involved in the examination and disposition of applications for patents, exclusive of design patents, to determine the grant or denial of patents based on such applications, and in the adjudication of petitions and appeals from decisions of such applications. Such work in its various aspects involves the utilization of the basic and advanced concepts of the natural sciences, the techniques of all branches of engineering and of the industrial arts, and the application of those aspects of procedural and substantive law generally, and of the statutory and case law applied to patents specifically, which are applicable to the patent examination process.

GS-1226 -Design Patent Examining

This series includes all classes of positions the duties of which are to supervise or perform professional, technical and legal work involved in the granting or denial of applications for design patents. Such work involves the employment of basic concepts of the natural sciences, techniques of the industrial arts, fundamentals of aesthetic and functional design, and the application of statutes and precedent decisions in design patent matters.

GS-1300 -PHYSICAL SCIENCES GROUP

GS-1301 -General Physical Science

This series includes positions that involve professional work in the physical sciences when there is no other more appropriate series, (that is, the positions are not classifiable elsewhere). This series also includes work in a combination of physical science fields, with no one predominant.

GS-1306 -Health Physics

This series includes positions that require primarily application of professional knowledge and competence in health physics, which is concerned, with the protection of persons and their environment from unwarranted exposure to ionizing radiation.

GS-1310 -Physics

This series includes positions that advise, administer, supervise, or perform research or other professional and scientific work in the investigation and applications of the relations between space, time, matter, and energy in the areas of mechanics, sound, optics, heat, electricity, magnetism, radiation, or atomic and nuclear phenomena.

GS-1313 -Geophysics

This series includes professional scientific positions requiring application of knowledge of the principles and techniques of geophysics and related sciences in the investigation, measurement, analysis, evaluation, and interpretation of geophysical phenomena and artificially applied forces and fields related to the structure, composition, and physical properties of the earth and its atmosphere.

GS-1315 Hydrology

This series includes positions that involve professional work in hydrology, the science concerned with the study of water in the hydrologic cycle. The work includes basic and applied research on water and water resources; the collection, measurement, analysis, and interpretation of information on water resources; the forecast of water supply and water flows; and the development of new, improved or more economical methods, techniques, and instruments

GS-1320 Chemistry

This series includes all positions involving work that requires full professional education and training in the field of chemistry. This work includes the investigation, analysis, and interpretation of the composition, molecular structure, and properties of substances, the transformations that they undergo, and the amounts of matter and energy included in these transformations. This work includes the investigation, analysis, and interpretation of the composition, physical and chemical properties, molecular structure and chemical reactions of substances; the prediction of transformation they undergo; and the amount of matter and energy included in these transformations.

GS-1321 Metallurgy

This series includes positions that require primarily professional education and training in the field of metallurgy, including ability to apply the relevant principles of chemistry, physics, mathematics, and engineering to the study of metals. Metallurgy is the art and science of extracting metals from their ores, refining them, alloying them and preparing them for use, and studying their properties and behavior as affected by the composition, treatment in manufacture, and conditions of use.

GS-1330 Astronomy and Space Science

This series includes professional positions requiring primarily application of the principles and techniques of astronomy and physics in the investigation and interpretation of the physical properties, composition, evolution, position, distance, and motion of extraterrestrial bodies and particles in space.

GS-1340 Meteorology

This series includes positions that involve professional work in meteorology, the science concerned with the earth's atmospheric envelope and its processes. The work includes basic and applied research into the conditions and phenomena of the atmosphere; the collection, analysis, evaluation, and interpretation of meteorological data to predict weather and determine climatological conditions for specific geographical areas; the development of new or the improvement of existing meteorological theory; and the development or improvement of meteorological methods, techniques, and instruments. Positions in this occupation require full professional knowledge and application of

meteorological methods, techniques, and theory.

GS-1350 .Geology

This series includes professional scientific positions applying knowledge of the principles and theories of geology and related sciences in the collection, measurement, analysis, evaluation, and interpretation of geologic information concerning the structure, composition, and history of the earth. This includes the performance of basic research to establish fundamental principles and hypotheses to develop a fuller knowledge and understanding of geology, and the application of these principles and knowledge to a variety of scientific, engineering, and economic problems.

GS-1360 .Oceanography

This series includes professional scientific positions engaged in the collection, measurement, analysis, evaluation and interpretation of natural and physical ocean phenomena, such as currents, circulation, waves, beach and near-shore processes, chemical structure and processes, physical and submarine features, depth, floor configuration, organic and inorganic sediments, sound and light transmission, color manifestations, heat exchange, and similar phenomena, and their interrelations' with other marine phenomena (e.g., biota, weather, geological structure, etc.) Oceanographers plan, organize, conduct, and administer seagoing and land-based study and research of ocean phenomena for the purpose of interpreting, predicting, utilizing and controlling ocean forces and events. This work requires a fundamental background in chemistry, physics, and mathematics and appropriate knowledge in the field of oceanography.

GS-1370 .Cartography

This series includes positions requiring the application of professional knowledge and skills in mapping and related sciences, and relevant mathematics and statistics to plan, design, research, develop, construct, evaluate and modify mapping and charting systems, products, and technology.

GS-1372 .Geodesy

This series includes professional positions requiring primarily application of the principles and techniques of geodesy. The work includes determining the size and shape of the earth and its gravitational field, measuring the intensity and direction of the force of gravity, and determining the horizontal and vertical positions of points on the earth and in space, where consideration of the curvature of the earth is required.

GS-1373 .Land Surveying

This series includes positions that involve professional work in land surveying, which is concerned with establishing, investigating, and reestablishing land and property

boundaries, and with preparing plats and legal descriptions for tracts of land. The work requires application of professional knowledge of the concepts, principles and techniques of surveying, including underlying mathematics and physical science, in combination with a practical knowledge of land ownership laws.

GS-1380 - Forest Products Technology

This series includes professional positions concerned with the development, improvement, and utilization of wood or wood products, including the study of preservation and treatment methods, the processing and production of wood products, the properties and structure of wood, and the production of lumber.

GS-1382 - Food Technology

This series includes positions that involve professional work concerning the application of science and technology to food product research, development, improvement, evaluation, production, processing, preservation, and packaging. The work requires knowledge of the biological, physical, and engineering sciences that make possible safe and wholesome food products; of food industry facilities, methods, processes, equipment capabilities and limitations; and of relevant laws, regulations, and agency programs.

GS-1384 - Textile Technology

This series includes classes of professional positions involving scientific and technological work with textiles or fibers, including investigation, development, and production, processing, evaluation, and application.

GS-1386 - Photographic Technology

This series includes professional positions requiring interdisciplinary knowledge and skills in those scientific and engineering fields that comprise photographic technology. This includes planning, research, design, development, modification, instrumentation, testing, and evaluation of photographic equipment and techniques.

GS-1400 - LIBRARY AND ARCHIVES

GS-1420 - Archivist

This series includes positions, which involve professional archival work in appraising, accessioning, arranging, describing, preserving, publishing, or providing reference service from public records and historic documents. This work requires a professional knowledge of archival principles and techniques, a comprehensive knowledge of the history of the United States and the institutions and organizations of the Federal Government, and a thorough understanding of the needs, methods, and techniques of scholarly research.

GS-1500 MATHEMATICS, STATISTICS, AND COMPUTER

GS-1510--Actuary

This series includes positions which involve the application of professional knowledge and experience in actuarial science (including mathematics, statistics, and business, financial, and economic principles) to programs or problems related to annuities, and to life, health, or property risks and contingencies.

GS-1515 Operations Research

This series includes positions which involve professional and scientific work requiring the design, development and adaptation of mathematical, statistical, econometric, and other scientific methods and techniques to analyze problems of management and to provide advice and insight about the probable effects of alternative solutions to these problems. The primary requirement of the work is competence in the rigorous methods of scientific inquiry and analysis rather than in the subject matter of the problem.

GS-1520 --Mathematics

This series includes all positions the duties of which are to advise on, administer, supervise, or perform work that requires professional education and training in the field of mathematics. This work includes research on basic mathematical principles, methods, procedures, techniques or relationships; the development of mathematical methods in the solution of a variety of scientific, engineering, economic and military problems, where the exactitude, of the relationships, the rigor and economy of mathematical operations, and the logical necessity of the results are the controlling considerations.

GS-1529 Mathematical Statistician

This series includes all classes of positions the primary duties of which are to advise on, administer, or perform professional, work requiring the design, development and adaptation of mathematical methods and techniques to statistical processes, or research in the basic theories and science of statistics.

GS-1530 Statistician

This series includes all classes of positions the duties of which are to administer or perform professional work, or to provide professional consultation in the application of statistical theories, techniques and methods to the gathering and/or interpretation of quantified information.

GS-1550 --Computer Science

This series includes professional positions, which primarily involve the application of, or research into, computer science methods and techniques to store, manipulate, transform or present information by means of computer systems. The primary requirements of the work are (1) professional competence in applying the theoretical foundations of computer science, including computer system architecture and system software organization, the representation and transformation of information structure, and the theoretical models for such representations and transformation; (2) specialized knowledge of the design characteristics, limitations, and potential applications of systems having the ability to transform information, and of broad areas of applications of computing which have common structures, processes, and techniques; and (3) knowledge of relevant mathematical and statistical sciences.

GS-1700 EDUCATION

GS-1701 General Education and Training

This series includes positions that primarily involve professional work in the field of education and training when the work is not more appropriately covered by another professional series in this or any other group. Included are positions where (1) the work has characteristics that may be identified with more than one professional education series with none predominant, (2) the combination of professional knowledge required by the work is not specifically covered by another series, or (3) the work is in a specialized professional field not readily identifiable with other existing series in this or any other group.

GS-1710 Education and Vocational Training

This series includes positions that require applying full professional knowledge of the theories, principles, and techniques of education and training to instructional and educational administration work in education programs operated by Federal agencies. Some positions also require specialized knowledge of one or more subjects in which the instruction is given.

GS-1720 Education Program

This series **covers' professional education positions** that involve promoting, coordinating, and improving education **policies, programs, standards, activities, and opportunities** in accordance with national **policies and objectives**. **Positions** in this series primarily involve the performance, supervision, **or formulation and implementation of policy concerning** education problems and issues. **These positions** require a professional knowledge of education theories, principles, **processes, and practices** at early childhood, elementary, secondary, or post secondary **levels, or in adult or** continuing education. They also require knowledge of the Federal Government's interrelationships with State and local educational agencies

or with public and private post secondary institutions.

GS-1725 Public Health Educator

This series includes positions involved in administering, supervising, or performing research or other professional work in public health education. Positions are concerned with providing leadership, advice, staff assistance, and consultation on health education programs. This includes analysis of behavioral and other situational factors affecting good health practices of individuals, groups, and communities; the planning of health education programs designed to meet the needs of particular individuals, groups, or communities; the selection of specialized educational methods, the preparation of educational materials, and the carrying out of such education activities which will best serve to stimulate the interest of individuals and groups in scientific discoveries affecting health in the application of health principles to daily living. Public health educators consult with State and local health departments, and with national and local voluntary agencies; organize community groups to study health problems and methods of disease prevention; and assist in coordinating mass health programs and in evaluating and improving health education programs.

GS-1730 Education Research

This series includes positions that primarily involve professional education research work. This includes the performance, leadership, management, or supervision of scientific research to solve educational problems or to develop new knowledge bearing on educational processes. The paramount requirements for this work are knowledge of and skill in applying research principles and methods and a broad and thorough knowledge of one or more scientific fields or interdisciplinary areas related to the education research work being performed.

GS-1 740 Education Services

This series includes professional positions the duties of which are to administer, supervise, promote, conduct, or evaluate programs and activities designed to provide individualized career-related or self- development education plans. The work requires knowledge of education theories, principles, procedures, and practices of secondary, adult, or continuing education. Some positions require skill in counseling students or enrollees to establish educational and occupational objectives.

GS-1750 Instructional Systems

This series includes professional positions the duties of which are to administer, supervise, advise on, design, develop, or provide educational or training services in formal education or training programs. The work requires knowledge of learning theory and the principles, methods, practices and techniques of one or more specialties of the instructional systems field. The work may require knowledge of one or more subjects or occupations in which educational or training instruction is provided.