CLASS SPECIFICATION

TITLE	GRADE	EEO-4	CODE
BIOSTATISTICIAN III	38	B	7.761
BIOSTATISTICIAN II	35	B	7.762
BIOSTATISTICIAN I	32	B	7.763

SERIES CONCEPT

Biostatisticians perform complex mathematical and statistical analysis on public health databases by applying statistical theories and principles to determine cause and effect relationships.

Develop, maintain and link databases; conduct health and population based studies and prepare statistical reports, forecasts and models.

Provide management with specific descriptive summaries and evaluations of numeric data that are necessary in developing public health policy.

Compile and analyze vital statistics for the State and prepare annual reports on the health of the citizens of the State.

Conduct comprehensive research and statistical analysis and evaluate the effectiveness of State programs for health care; identify appropriate questions and design the research methodology to produce the desired results.

Compile a variety of statistical data and prepare numerous statistical reports relating to disease and health in the State; conduct the epidemiological study of health data currently collected and maintained by various data systems including the State Cancer Registry and other data repositories such as trauma registry, medical billing and claims databases and vital statistics (birth and death), among others; perform follow-up analyses where necessary; and publish comprehensive documented reports of study results.

Conduct surveys in accordance with accepted methods and principles of random sampling, survey design and evaluation of study results.

Provide recommendations to the State Board of Health, State Health Officer, Division Administrators and others regarding statistical findings and provide advice related to various statistical matters as required.

Provide technical assistance and advice on the application of statistical methods.

Perform related duties as assigned.

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CLASS CONCEPTS

Biostatistician III: Under general supervision, the incumbent has primary responsibility for the data warehouse and linkage unit; ensures quality control measures are applied to all databases; monitors data connection activities; directs statistical and analytical activities applied to various databases; prepares statistical reports based upon analysis of the data; assists the Chief Biostatistician; and provides technical support regarding theories, applications, statistical methodology, data analysis, database management and database linkage to staff within the bureau and to other division personnel. In addition, the incumbent supervises the work of lower level

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CLASS CONCEPTS (cont'd)

Biostatistician III: (cont'd)
Biostatisticians to include responsibility for training, developing work performance standards, evaluating performance and recommending disciplinary action.

Biostatistician II: Under general supervision, incumbents perform the full range of duties described in the series concept and conduct statistical analysis by gathering data from various sources using computer software. Incumbents analyze a variety of health and population data, link and match databases; gather, compile and analyze physical, behavioral, social and cultural research and statistical data; prepare questionnaires and forms for gathering raw data and present data in graphic, pictorial and tabular form using descriptive statistics for measures of central tendency, dispersion and trend; analyze and interpret the significance of raw data and the validity and reliability of survey/study findings; prepare or assist in the preparation of research and project reports. This is the journey level in the series.

Biostatistician I: Under close supervision, incumbents receive training in performing the duties described in the series concept. This is the entry level in the series and incumbents may progress to the next level upon meeting the minimum qualifications and with the approval of the appointing authority.

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MINIMUM QUALIFICATIONS

BIOSTATISTICIAN III

EDUCATION AND EXPERIENCE: Master's degree from an accredited college or university in statistics, mathematics or closely related field and two years of professional experience in biostatistics linking data elements in a comprehensive data warehouse, monitoring data connection activities and preparing statistical reports based upon analysis of data; **OR** a Bachelor's degree from an accredited college or university in statistics, mathematics or closely related field and three years of professional experience as described above; **OR** two years of experience as a Biostatistician II in Nevada State service; **OR** an equivalent combination of education and experience as described above.

ENTRY LEVEL KNOWLEDGE, SKILLS, AND ABILITIES (required at time of application):
Detailed knowledge of: theoretical basis for statistical research methods, techniques, and their applications; capabilities and limitations of tabulating and calculating data; database management and data linkages. **Working knowledge of:** demography and epidemiology principles and practices; various types of statistical and database management software and data linkages. **Ability to:** comprehend, modify and apply new techniques contained in current statistics literature to research public health policy issues; *and perform all knowledge, skills, and abilities required at the lower levels*.

FULL PERFORMANCE KNOWLEDGE, SKILLS, AND ABILITIES (typically acquired on the job):
Working knowledge of: database management, data linkage, data analysis and statistical reporting. **General knowledge of:** current public health terminology. **Ability to:** comprehend, modify and apply new techniques contained in current statistics literature to research health policy issues; perform analysis of health issues and developments; prepare and present research reports based on analysis of statistical evidence; explain statistical concept to other statisticians and non-statisticians; assign and review work, conduct work performance evaluations, provide training; and perform supervisory techniques including disciplinary processes, employee evaluation and the development of work performance standards.

BIOSTATISTICIAN II

EDUCATION AND EXPERIENCE: Bachelor's degree from an accredited college or university in statistics, mathematics or closely related field and one year of professional experience conducting statistical analysis including gathering and analyzing data from various sources using computer software; **OR** one year of

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MINIMUM QUALIFICATIONS (cont'd)

BIOSTATISTICIAN II (cont'd)

EDUCATION AND EXPERIENCE: (cont'd)
experience as a Biostatistician I in Nevada State service; **OR** an equivalent combination of education and experience as described above.

ENTRY LEVEL KNOWLEDGE, SKILLS, AND ABILITIES (required at time of application):
Working knowledge of: probability, statistical techniques and their applications; capabilities and limitations of tabulating and calculating data; various methods of presenting statistical data; operation of computers and appropriate statistical software packages; theoretical basis for statistical research methods, techniques and their applications; current public health terminology; theoretical principles used in estimation and hypothesis testing; analysis of variance and covariance; fitting of regression curves, probability and experimental design. **General knowledge of:** demography and epidemiology principles and problems. **Ability to:** accurately present qualitative and quantitative information both orally and in writing; establish and maintain effective working relationships with associates, other public agencies and private entities; *and perform all knowledge, skills and abilities required at the lower level*.

FULL PERFORMANCE KNOWLEDGE, SKILLS, AND ABILITIES (typically acquired on the job):
(These are identical to the Entry Level Knowledge, Skills and Abilities required for Biostatistician III.)

BIOSTATISTICIAN I

EDUCATION AND EXPERIENCE: Bachelor's degree from an accredited college or university in statistics, mathematics or closely related field; **OR** graduation from high school or equivalent education and two years of paraprofessional experience assisting in conducting statistical analysis including gathering and analyzing data from various sources using computer software; **OR** one year of experience as a Statistician II in Nevada State service; **OR** an equivalent combination of education and experience as described above.

ENTRY LEVEL KNOWLEDGE, SKILLS, AND ABILITIES (required at time of application):
Working knowledge of: fundamental research and statistical techniques; theoretical basis for statistical research methods. **General knowledge of:** survey, sampling and research design techniques; statistical theories and principles; operation of computers and appropriate statistical software packages. **Ability to:** learn complex research and statistical analysis methods and processes specific to statistical data and studies; compile, assemble and analyze data; apply analytical thinking to specific problems; communicate effectively both orally and in writing.

FULL PERFORMANCE KNOWLEDGE, SKILLS, AND ABILITIES (typically acquired on the job):
(These are identical to the Entry Level Knowledge, Skills and Abilities required for Biostatistician II.)

This class specification is used for classification, recruitment, and examination purposes. It is not to be considered a substitute for work performance standards for positions assigned to this series.

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ESTABLISHED:	10/18/01R	10/18/01R	10/18/01R
	5/6/02UC	5/6/02UC	5/6/02UC
REVISED:	12/12/06UC	12/12/06UC	12/12/06UC
REVISED:	9/20/19PC	9/20/19PC	9/20/19PC