

ILLINOIS DEPARTMENT OF CENTRAL MANAGEMENT SERVICES  
CLASS SPECIFICATION

STATISTICAL RESEARCH SPECIALIST III

POSITION CODE: 42743

Effective: 12-1-02

DISTINGUISHING FEATURES OF WORK:

Under direction, functions as an advanced specialist or regular project leader, responsible for conducting studies which require the modification and adaptation of a variety of methods or the development of new systems, procedures, or innovative research designs for data collection, analysis and interpretation; acts independently in the planning and execution of a variety of projects and makes authoritative and final technical decisions requiring considerable professional skill and judgment; evaluates the effectiveness of statistical treatments to interpret a variety of statistical data involving complex and subtle interrelationships and to provide sophisticated advice and recommendations on statistics and statistical methodology; as a project leader, coordinates larger projects to assure completion within projected time frames, coordinating activities with assigned project team members.

ILLUSTRATIVE EXAMPLES OF WORK:

1. As an advanced specialist or project leader, conducts several related studies or several segments of a major data collection and analysis project to be coordinated and kept in progress simultaneously; functions with technical independence, developing a research design and timetable for supervisory review and approval, coordinating study components from initiation of the study and planning of methods through the execution of the plans, to the final interpretation and narrative reports; responsible for coordinating project development with assigned team members with responsibility for the timely completion of all project components.
2. Analyzes factual information, recognizes and evaluates significant and critical factors in studies to solve complex problems, draw rational inferences based on statistical data, and publish comprehensive reports of findings.
3. Recommends the initiation or modification of technical or administrative policy, the preliminary analysis and evaluation of proposed projects and studies, and the establishment of technical regulations and instructions for the conduct of statistical work.
4. Maintains liaison with the federal government and with state or private research organizations for the development of cooperative efforts and for the exchange of ideas, information and data. Such contacts may require difficult or delicate negotiations and considerable responsibility for the public relations of the statistical research program.
5. Tests computer programs for validity; identifies statistical issues in need of clarification; interprets computer generated statistical reports to other staff members; uses statistical report generating software and established data bases to create reports for special requests.

## STATISTICAL RESEARCH SPECIALIST III (Continued)

6. Performs other duties as required or assigned which are reasonably within the scope of those enumerated above.

### DESIRABLE REQUIREMENTS:

#### Education and Experience

Requires knowledge, skill and mental development equivalent to completion of four years of college with courses in statistics, computer science, mathematics, economics and related fields.

Requires two year of progressively responsible experience in the development and application of research designs and statistical methods and techniques, preferably in the job related subject matter area.

#### Knowledges, Skills and Abilities

Requires extensive knowledge of the development and application of research design techniques and their application to social and economic data.

Requires extensive knowledge of the interpretation of results of statistical applications.

Requires extensive knowledge of narrative report preparation.

Requires working knowledge of all statistical procedure used by an agency.

Requires working knowledge of the uses and application of data processing equipment for statistical analysis and report generation.

Requires working knowledge of simple computer program development and modification.

Requires working knowledge of the testing and validation of computer programs.

Requires working knowledge of the development and implementation of work plans which identify the informational resources needed for report preparation.

Requires ability to develop and apply complex research design techniques.

Requires ability to apply utilize complex statistical techniques in the analysis of social and economic data.

Requires ability to select those statistical techniques which are appropriate to specific research designs or reports.

Requires ability to interpret the results of statistical applications.

Requires ability to use data processing equipment for data analysis and report generation.

Requires ability to write complex statistical reports based upon analysis of social and economic data.

Requires ability to identify those resources needed for report preparation.

Requires ability to develop and modify limited computer programs to meet the requirements of specific research designs and reports.

Requires ability to develop and implement work plans which identify the informational resources needed for report preparation.

Requires ability to establish and maintain effective working relationships and communication skills with agency personnel.

In addition to English verbal and written skills, candidates may be required to translate, speak and write a foreign language at a colloquial skill level. Some positions may require manual communication skills.