STATE OF OREGON

EXECUTIVE DEPARTMENT
Personnel and Labor Relations Division

POSITION DESCRIPTION

This position is:

( ) Mgmt Service-Supv
( ) Mgmt Service-Conf
(X) Classified
( ) Unclassified
( ) Executive Service

* * PLEASE READ INSTRUCTIONS BEFORE COMPLETING THIS FORM * *

( ) New (X) Revised

SECTION 1. POSITION INFORMATION

a. Class Title: IS 7
b. Class No.: C1487
c. Effective Date:
d. Position No.: 9500.057
e. Working Title: Database Analyst
f. Work Unit: Research and Evaluation Unit
g. Agency No.: 29100
h. Agency Name: Dept. of Corrections
I. Employee Name:
j. Work Location (City-County): Salem/Marion

k. Position: (X) Permanent ( ) Seasonal ( ) Limited Duration ( ) Academic Year
(X) Full Time ( ) Part Time ( ) Intermittent ( ) Job Share

l. FLSA: (X) Exempt ( ) Non-Exempt
m. Eligible for Overtime: ( ) Yes (X) No

SECTION 2. PROGRAM/POSITION INFORMATION

a. Describe the program in which this job exists. Include program purpose, who's affected, size, and scope. Include relationship to agency mission.

The Research Unit provides the Department with mission-critical information on offender populations, program performance and policy impacts necessary to plan, evaluate, and direct the operations of the Department. The information and evaluation provided by the unit impacts the decision making in the operation of the state's 14 prisons, the probation and parole supervision functions in 36 counties, the six administrative divisions of the Department and the Board of Parole and Post Prison Supervision. The unit also provides statistical information and analysis to other state and local agencies for their planning and research purposes. In addition, the unit plans, implements and manages the Department's data warehouse including the Corrections Management Information System.

The largest of the automated databases that feed into the Department's Decision Support System, is the Corrections Information System (CIS). CIS tracks 14,000 inmates and 36,000 offenders on community supervision, plus historical data on offenders who are no longer active. CIS includes the following types of data: offenses, sentences and projected release dates; sentence computation; conditions of community supervision; inmate work schedules and attendance for Measure 17 compliance; approved inmate visitor lists; inmate housing; inmate health status; gang information; chronological supervision case notes; and other related types of data. Additional databases that feed into the Department's data warehouse include information from the Board of Parole and Post-Prison Supervision, as well as Inmate Intake and religious services information and other related types of data.

b. Describe the purpose of this position, and how it functions within this program, by completing this statement:

The purpose of this position is to design, implement, and maintain database systems for the purpose of research and evaluation. This position works with managers, information systems staff, researchers, and planners in institutions, community offices, administrative offices, and other information systems professionals to create optimal data structures for the Department's data warehouse and Corrections Management Information System. The position provides database analysis, planning and coordination, design, development, and maintenance of the Department's data warehouse and Corrections Management Information System.

The work involves evaluation of complex computer applications to determine the optimal operating efficiency and maximum utilization of computer data resources. This position resolves operational problems with the data warehouse and management information systems and provides technical assistance to the users of the data warehouse's data structures.

SECTION 3. DESCRIPTION OF DUTIES

List major duties. Note percentage of time duties are performed. If this is an existing position, mark "N" for new duties or "R" for revised duties.

% of Time	N/R	DUTIES

40% N **Construction**

Plans the agenda of and chairs data warehouse database design reviews, working closely with user groups, management, and other information system professionals to define the data requirements within the data warehouse. Coordinates consensus among various diverse interests to create the optimal data structures for decision support. Uses formal design procedures to define data structures that govern what information will be stored in the database, how it will be organized, physically stored and accessed. This position designs, implements, and maintains the transformation and mappings of data feeding into the data warehouse structure to maintain data integrity, accuracy, and consistency. Constructs and maintains the data warehouse metadata.

Designs data analysis components such as databases, files, forms, and reports. Evaluates query/reporting tools and statistical packages and selects and configures appropriate tools for effective dissemination of information within the decision support and executive information database systems . Designs, develops, tests, implements, and maintains the Department's data warehouse. Provides technical assistance on these systems to other technical staff.

Designs and maintains data warehouse logical data model and designs, maintains, and implements database physical model by coding in Structured Query database language (SQL) the descriptions and specifications necessary to load data into files and control programs running against it. Designs and maintains web reporting interfaces, reports and other programs using SAS Programming Language and SQL. Designs and implements various diagnostic programs to monitor performance of database and make modifications as needed to maintain efficient and accurate operation.

Programs security functions into the Department's data warehouse database to control how much of the database a given user can access. Updates the data warehouse data dictionaries, documents the data warehouse database architecture and supporting documentation that defines data elements, file structures, and how they interface with application programs and databases being run on the source systems. Educates and monitors other technical users in guidelines and standards for decision support databases to ensure consistency in naming conventions, file structures, and programming standards.

The data warehouse database is used by multiple jurisdictions in multiple remote locations. Business practices and data interpretations vary among jurisdictions and locations. The data warehouse database is subject to an extremely high level of expansion and change and the technology involved mixes database and operating systems. The data warehouse database uses emerging technologies to meet user needs and involves multiple vendors.

40% N **Customer Assistance**

Analyzes database and data integrity problems and verifies data integrity for statewide offender tracking and management data warehouse database. Troubleshoots problems identified through this analysis and referred problems. Coordinates with other IS staff and multiple vendors to identify solutions and work to implement fixes. Monitors data usage and makes recommendations and implements necessary changes on resource, tuning and maintenance requirements.

Trains and makes recommendations to managers, executive assistants, staff, other researchers, and planners in institutions, county offices and administrative offices on how to retrieve information and graphically present data from the data warehouse.

Responds in person, by phone and by electronic mail to user inquiries about query / reporting tools, statistical packages, the DB2 and Oracle databases, and data analysis concepts and methods. Provides ad hoc and informal training as required. Manage requests for new Corrections Management Information System development, enhancements, and ad hoc query

reports from internal and external customers.

The data warehouse database is large and has an extremely high level of expansion and change. The data warehouse includes business process data integration concerning multiple criminal justice jurisdictions and remote locations. This position will build consensus for resolution of conflict among parties contributing source data. The data warehouse database uses emerging technologies to meet user needs, and involves multiple vendors.

15% N **Planning**

Determines tools, technology, policies, designs, procedures and documentation standards considering issues such as resource utilization, acquisition planning, overall system performance, security and new technologies for the Department's data warehouse. Assesses new technologies in the data-warehousing realm and evaluates and tests these new technologies with existing systems, and makes recommendations for adoption. Monitors and addresses resource utilization. Plans long term direction for data structures, database tools, data sharing, data location, data security and integrity in the data warehousing environment using multiple systems in multiple jurisdictions and remote locations, mixed standards, and an extremely high level of expansion and change.

Recommends ways that business operations can effectively utilize system resources. Considers system features, configuration and compatibility issues. Designs, reviews and approves logical data models for new constructs for conformance to overall strategic plan and physical design standards within the data warehouse database.

Works with information systems staff to provide a research perspective in planning, designing, and implementing new databases and information systems. Communicates unmet research and evaluation needs to developers and planners so systems can be created or migrated to meet those needs.

5% N **Operations**

Monitors backup and recovery procedures and error logs to ensure optimal operation or to restore operation after system failure. Monitors the performance of the data warehouse database and researches and implements optimization strategies. Plans, schedules, and implements database installations and upgrades of multiple database and related products, coordinating with ISU operations and other state and county agencies.

SECTION 4. WORKING CONDITIONS

Describe special working conditions, if any, that are a regular part of this job. Include frequency of exposure to these conditions.

Extensive work performed on video display terminals. Exposure to inmates in the workplace. Occasional travel may be required. Employee may work a variety of irregular hours in order to maintain operational systems at our facilities.

SECTION 5. GUIDELINES

a. List any established guidelines used to do this job, such as state or federal laws or regulations, policies, manuals or desk procedures.

DOC Rules and Procedures
OAR and Statutes
ISU Procedures and Standards Manual
Criminal Code of Oregon
CJIS Standards

b. How are these guidelines used to perform the job?

Thorough knowledge and applications of guidelines is necessary and provide limitations, directions, and operating instructions.

SECTION 6. WORK CONTACTS

With whom outside of co-workers in this work unit must this position regularly come in contact?

Who Contacted	How	Purpose	How Often?
Staff and Management From Central Office, Institutions, counties, Parole Board, other Agencies, and vendors.	Telephone, written form and in person.	advise on planning, development, implementation, coordination for the operations maintenance, installation and construction of information systems.	Daily

SECTION 7. JOB-RELATED DECISION MAKING

Describe the kinds of decisions likely to be made by this position. Indicate affect of these decisions where possible.

This position will make decisions on database design, database security and integrity, and appropriate data standards within the data warehouse and Corrections Management Information System database for research and evaluation purposes. This position will make decisions about the need for training and method of training delivery. Good decisions about training and technical assistance will enable users of the data warehouse databases to meet their research and analysis needs. In making good decisions regarding database design, security and integrity and appropriate data standards for decision support, this position enables research analysts, management, and other end-users both intra-agency and inter-agency to generate their own analyses and reports and make accurate and thoughtful data-based management and operational decisions. These decisions affect how the data entered into the Department's transactions systems is viewed by the users of those transactional systems as data input is transformed within the Department's data warehouse into usable and understandable information.

SECTION 8. REVIEW OF WORK

Who reviews the work of this position? (List classification title and position number.) How? How often? Purpose of the review?

The Research Manager (Principal Executive Manager E) reviews work in weekly briefings or more often as needed to determine progress in meeting project time frames and to assist in determining priorities. This position functions with a great degree of independence to create plans and use methods and resources to accomplish project goals.

SECTION 9. SUPERVISORY DUTIES TO BE COMPLETED ONLY FOR POSITIONS IN MANAGEMENT SERVICE

a. How many employees are directly supervised by this position? 0 Through Subordinate Supervisors? 0

b. Which of the following supervisory/management activities does this job perform?

( ) Plans Work
( ) Assigns Work
( ) Approves Work
( ) Responds to Grievances
( ) Disciplines/Rewards
( ) Hires/Fires (or Effectively Recommends)
( ) Prepares and Signs Performance Appraisals

SECTION 10. ADDITIONAL JOB-RELATED INFORMATION

Any other comments that would add to an understanding of this position:

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This position requires extremely strong verbal and written skills, and the ability to effectively communicate difficult technical automation concepts to end-users and managers who may have little or no automation experience. It requires a thorough knowledge of databases and automated systems, including PC-based and server-based systems and networks. It requires the ability to comprehend complex details of DOC's automated systems and AS/400 and Windows server operations. Knowledge of DOC data, including definitions, usage, and issues is critical.

SPECIAL REQUIREMENTS: List any special mandatory recruiting requirements for this position:

Working experience using SQL, AS/400 Utilities, DB2, Oracle, and SQL Server DBMS, structured programming techniques, SAS business intelligence and analytical tools, data transformation software and techniques, and data warehousing techniques and theories. Excellent oral and written communication skills.

BUDGET AUTHORITY: If this position has authority to commit agency operating money, indicate in what area, how much (biennially) and type of funds:

SECTION 11. ORGANIZATIONAL CHART

Attach a current organizational chart. See instructions for detail to be included on the chart.

Employee Signature

Date

Supervisor Signature

Date