

**AUDITOR OF STATE**  
CLASSIFICATION  
SPECIFICATION

**CLASSIFICATION SERIES:**  
SYSTEMS PROGRAMMER

**SERIES NO.:**  
6419

**MAJOR AGENCIES:**  
AUDITOR OF STATE ONLY

**EFFECT. DATE:**    **NEW EFF. DATE:**  
01/10/1999

**SERIES PURPOSE:**

THE PURPOSE OF THE SYSTEMS PROGRAMMER OCCUPATION IS TO MAXIMIZE RESPONSE TIME & OVERALL SYSTEM PERFORMANCE OF MAINFRAME COMPUTERS.

AT THE FOUR LOWER-LEVELS, INCUMBENTS LEARN TECHNICAL NUANCES OF MAINFRAME ENVIRONMENT, DO VSAM TUNING & ASSIST INSTALLATION & MODIFICATION OF SYSTEM SOFTWARE PACKAGES, OR ASSIST IN INVESTIGATION OF SOFTWARE PACKAGES & MAINTAIN & ENHANCE EXISTING SOFTWARE PACKAGES, OR EVALUATE, INSTALL, TEST &/OR MAINTAIN VERY COMPLEX MAINFRAME COMPUTER SOFTWARE & DO SYSTEM CAPACITY PLANNING & TUNING, OR ACT AS LEAD WORKER, WITH THE DEGREE OF SUPERVISION RECEIVED BEING MINIMIZED AS THE CLASS LEVEL INCREASES.

**CLASS TITLE:**

SYSTEMS PROGRAMMER 1

**CLASS NUMBER:**

64191

**EFFECTIVE DATE:**

01/10/1999

**NEW EFFECTIVE DATE:**

**CLASS CONCEPT:**

THE DEVELOPMENTAL LEVEL CLASS WORKS UNDER IMMEDIATE SUPERVISION & REQUIRES WORKING KNOWLEDGE OF COMPUTER SCIENCE, OPERATING SYSTEMS PROGRAMMING & JOB CONTROL LANGUAGE IN ORDER TO LEARN TECHNICAL NUANCES (I.E., EFFECT ONE SOFTWARE PRODUCT HAS ON ANOTHER OR UPON SYSTEM AS WHOLE) OF MAINFRAME ENVIRONMENT, DO VSAM (I.E., VIRTUAL STORAGE ACCESS METHOD) TUNING (E.G., REVIEW STATISTICS TO DETERMINE PERFORMANCE OF VSAM FILES; RECOGNIZE INDICATIONS THAT FILES ARE BECOMING INEFFICIENT & TAKE APPROPRIATE MEASURES; RESOLVE PROBLEMS WITH FILES; REORGANIZE VSAM FILES; CHANGE SETTING OF PARAMETERS EFFECTING DISTRIBUTION OF RECORDS WITH FILE & DETERMINE MOST OPTIMAL PLACEMENT OF FILES ON SYSTEM) & ASSIST IN INSTALLATION & MODIFICATION OF SYSTEM SOFTWARE PACKAGES.

**CLASS TITLE:**

SYSTEMS PROGRAMMER 2

**CLASS NUMBER:**

64192

**EFFECTIVE DATE:**

01/10/1999

**NEW EFFECTIVE DATE:**

**CLASS CONCEPT:**

THE FULL PERFORMANCE LEVEL CLASS WORKS UNDER GENERAL SUPERVISION & REQUIRES CONSIDERABLE KNOWLEDGE OF COMPUTER SCIENCE & OPERATING SYSTEMS PROGRAMMING IN ORDER TO ASSIST IN INVESTIGATION OF VARIOUS SOFTWARE PACKAGES UNDER GUIDANCE & DIRECTION OF MORE SENIOR SYSTEMS PROGRAMMERS &/OR SUPERVISOR, DEVELOP INTERFACES (I.E., COMMUNICATION LINKS BETWEEN/AMONG COMPUTER APPLICATIONS AFTER INSTALLATION IN ORDER FOR DATA TO BE SHARED) & MAINTAIN & ENHANCE EXISTING SOFTWARE PACKAGES (E.G., RESOLVE PROBLEMS BY APPLYING VENDOR SUPPLIED FIXES OR DEVELOP INTERNAL RESOLUTIONS).

**CLASS TITLE:**  
SYSTEMS PROGRAMMER 3

**CLASS NUMBER:**  
64193

**EFFECTIVE DATE:**  
01/10/1999

**NEW EFFECTIVE DATE:**

**CLASS CONCEPT:**

THE FIRST ADVANCED LEVEL CLASS WORKS UNDER DIRECTION & REQUIRES THOROUGH KNOWLEDGE OF COMPUTER SCIENCE & OPERATING SYSTEMS PROGRAMMING IN ORDER TO EVALUATE, INSTALL, TEST &/OR MAINTAIN VERY COMPLEX MAINFRAME COMPUTER SOFTWARE (I.E., SOFTWARE REQUIRING INTERFACES TO OTHER LARGE, COMPLEX COMPUTER SYSTEMS OR SPECIAL CONSIDERATIONS TO OPERATING SYSTEM OF HOST COMPUTER) & DO SYSTEMS CAPACITY PLANNING (I.E., ANALYZE SYSTEM PERFORMANCE REPORTS TO DETERMINE IF SUFFICIENT COMPUTER RESOURCES ARE AVAILABLE TO SATISFY CUSTOMER DEMANDS & THAT THOSE RESOURCES ARE PERFORMING OPTIMALLY; STUDY TRENDS IN COMPUTER USAGE TO FORECAST UPGRADES & ENHANCEMENTS SYSTEM WILL REQUIRE TO MEET INCREASING DEMANDS FOR DATA STORAGE, TAPE HANDLING, NETWORK & HOST COMPUTER PERFORMANCE; RECOMMEND, TEST & IMPLEMENT CHANGES IN CONFIGURATION OF COMPUTER SYSTEM) & TUNING (I.E., DEFINING & TAKING NECESSARY ACTION TO IMPROVE EFFICIENCY OF OPERATING SYSTEM).

**CLASS TITLE:**  
SYSTEMS PROGRAMMER 4

**CLASS NUMBER:**  
64194

**EFFECTIVE DATE:**  
01/10/1999

**NEW EFFECTIVE DATE:**

**CLASS CONCEPT:**

THE SECOND ADVANCED LEVEL CLASS WORKS UNDER DIRECTION & REQUIRES THOROUGH KNOWLEDGE OF COMPUTER SCIENCE & OPERATING SYSTEMS PROGRAMMING IN ORDER TO LEAD TEAM (I.E., PROVIDE WORK DIRECTION & TRAINING, COMPLETE PROJECT PLANS & MAKE ASSIGNMENTS AS INDICATED IN PLAN) OF OTHER SYSTEMS PROGRAMMERS &/OR OPERATIONS ANALYSTS IN COMPLETING PROJECTS, ASSIST OTHER SYSTEMS PROGRAMMERS IN RESOLVING MORE DIFFICULT TECHNICAL PROBLEMS, IDENTIFY USER REQUIREMENT & LEAD DEVELOPMENT EFFORTS (E.G., OVERSEE OTHERS IN ANALYZING USER REQUIREMENTS, DEVELOPING CRITERIA FOR SELECTION OF NEW SOFTWARE, ASSISTING IN PROCUREMENT PROCESS TO OBTAIN NEW SOFTWARE & IN INSTALLATION, TESTING & MODIFICATION OF SOFTWARE).

<b>CLASS TITLE:</b> SYSTEMS PROGRAMMER 1	<b>CLASS NO.:</b> 64191	<b>BARG. UNITS:</b> 051
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**EFFECTIVE DATE:**

01/10/1999

**NEW EFFECTIVE DATE:**

**JOB DUTIES IN ORDER OF IMPORTANCE: (THESE DUTIES ARE ILLUSTRATIVE ONLY. INCUMBENTS MAY PERFORM SOME OR ALL OF THESE DUTIES OR OTHER JOB-RELATED DUTIES AS ASSIGNED.)**

LEARNS TECHNICAL NUANCES OF MAINFRAME ENVIRONMENT, DOES VSAM TUNING & ASSISTS IN INSTALLING, TESTING & MAINTAINING OPERATING SYSTEM SOFTWARE ON MAINFRAME COMPUTER IN ORDER TO MAXIMIZE COMPUTER RESPONSE TIME & TO ENHANCE OVERALL SYSTEM PERFORMANCE (I.E., PARTICIPATES IN PRE-INSTALLATION PLANNING; READS TECHNICAL COMPUTER SYSTEMS/SOFTWARE MANUALS & GUIDES; PERFORMS REGRESSION TESTING; MONITORS HARDWARE PERFORMANCE AS RESULT OF SOFTWARE CHANGES; EVALUATES VENDOR SOFTWARE RELEASES; RESTORES SYSTEM FOLLOWING MASSIVE SOFTWARE OR HARDWARE FAILURES; MAINTAINS SYSTEM SECURITY).

PROVIDES TECHNICAL ASSISTANCE TO MANAGEMENT & SYSTEM USERS; IDENTIFIES, ANALYZES & RESOLVES SOFTWARE PROBLEMS ASSOCIATED WITH TELEPROCESSING APPLICATIONS; TRAINS PROGRAMMERS & COMPUTER OPERATIONS PERSONNEL IN USE OF SOFTWARE & HARDWARE; ANALYZES SYSTEM &/OR REGION DUMPS/ERROR MESSAGES.

WRITES EXIT ROUTINES &/OR PROGRAMS TO INTERACT WITH SYSTEM SOFTWARE; RECOMMENDS PROGRAMMING & OPERATING STANDARDS TO AID IN OPTIMUM SOFTWARE/ HARDWARE PERFORMANCE; PREPARES SYSTEM PERFORMANCE & USAGE REPORTS; MAKES BACK-UP COPIES OF SYSTEM SOFTWARE DATA TO BE USED IN SYSTEM RECOVERY; CONFERS WITH NETWORK ADMINISTRATORS IN DESIGN & MAINTENANCE OF NETWORK OPERATING SYSTEMS; ANALYZES, DESIGNS & IMPLEMENTS DATA COMMUNICATION SERVICES AS ELEMENT OF OVERALL OPERATING SYSTEM DESIGN.

**MAJOR WORKER CHARACTERISTICS:**

KNOWLEDGE OF COMPUTER SCIENCE; COMPUTER HARDWARE & PERIPHERAL EQUIPMENT; FUNCTIONS & CAPABILITIES OF SOFTWARE SYSTEMS; COMPUTER PROGRAMMING; SOFTWARE & RELATED HARDWARE SYSTEMS; JOB CONTROL & REPORT-GENERATING LANGUAGES. ABILITY TO READ & UNDERSTAND VARIETY OF TECHNICAL MATERIAL RELATED TO COMPUTER SOFTWARE & RELATED HARDWARE SYSTEMS; DEFINE PROBLEMS, COLLECT DATA, ESTABLISH FACTS & DRAW VALID CONCLUSIONS; COMMUNICATE VERBALLY ON TECHNICAL MATTERS; MOVE LIMBS/FINGERS EASILY TO OPERATE COMPUTER TERMINAL.

(\*)DEVELOPED AFTER EMPLOYMENT.

**MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:**

COMPLETION OF UNDERGRADUATE CORE PROGRAM IN COMPUTER SCIENCE WHICH INCLUDED STUDY IN ASSEMBLER, REXX, CLIST & COBOL LANGUAGES; 12 MOS. TRG. OR 12 MOS. EXP. IN JOB CONTROL LANGUAGE; 3 MOS. TRG. OR 3 MOS. EXP. IN SOFTWARE INSTALLATION & MAINTENANCE FOR MAINFRAME OPERATING SYSTEMS.

-OR EQUIVALENT OF MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT NOTED ABOVE.

**TRAINING AND DEVELOPMENT REQUIRED TO REMAIN IN THE CLASSIFICATION AFTER EMPLOYMENT:**

NOT APPLICABLE.

**UNUSUAL WORKING CONDITIONS:**

WORK INVOLVES OPERATION OF COMPUTER TERMINAL FOR LONG PERIODS OF TIME.

<b>CLASS TITLE:</b> SYSTEMS PROGRAMMER 2	<b>CLASS NO.:</b> 64192	<b>BARG. UNITS:</b> 051
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**EFFECTIVE DATE:**

01/10/1999

**NEW EFFECTIVE DATE:**

**JOB DUTIES IN ORDER OF IMPORTANCE: (THESE DUTIES ARE ILLUSTRATIVE ONLY. INCUMBENTS MAY PERFORM SOME OR ALL OF THESE DUTIES OR OTHER JOB-RELATED DUTIES AS ASSIGNED.)**

ASSISTS IN INVESTIGATION OF VARIOUS SOFTWARE PACKAGES WITH SOME GUIDANCE & DIRECTION FROM MORE SENIOR SYSTEMS PROGRAMMER OR SUPERVISOR, DEVELOPS INTERFACES, & INSTALLS, TESTS & MAINTAINS OPERATING SYSTEM SOFTWARE ON MAINFRAME COMPUTER IN ORDER TO MAXIMIZE COMPUTER RESPONSE TIME & TO ENHANCE OVERALL SYSTEM PERFORMANCE (I.E., PARTICIPATES IN PRE-INSTALLATION PLANNING; READS TECHNICAL COMPUTER SYSTEMS/SOFTWARE MANUALS & GUIDES; PERFORMS REGRESSION TESTING; INSTALLS NEW SOFTWARE PACKAGES/UPGRADES; MONITORS HARDWARE PERFORMANCE AS RESULT OF SOFTWARE CHANGES; EVALUATES VENDOR SOFTWARE RELEASES; RESTORES SYSTEM FOLLOWING MASSIVE SOFTWARE OR HARDWARE FAILURES; MAINTAINS SYSTEM SECURITY).

PROVIDES TECHNICAL ASSISTANCE TO MANAGEMENT & SYSTEM USERS; IDENTIFIES, ANALYZES & RESOLVES SOFTWARE PROBLEMS ASSOCIATED WITH TELEPROCESSING APPLICATIONS; CONTACTS VENDOR REPRESENTATIVES TO RESOLVE SYSTEM PROBLEMS; TRAINS PROGRAMMERS & COMPUTER OPERATIONS PERSONNEL IN USE OF SOFTWARE & HARDWARE; ANALYZES SYSTEM &/OR REGION DUMPS/ERROR MESSAGES; CONFERS & COORDINATES WITH NETWORK ADMINISTRATORS IN DESIGN & MAINTENANCE OF NETWORK OPERATING SYSTEMS; ANALYZES, DESIGNS & IMPLEMENTS DATA COMMUNICATION SERVICES AS ELEMENTS OF OVERALL OPERATING SYSTEM DESIGN.

WRITES EXIT ROUTINES &/OR PROGRAMS TO INTERACT WITH SYSTEM SOFTWARE; RECOMMENDS PROGRAMMING & OPERATING STANDARDS TO AID IN OPTIMUM SOFTWARE/HARDWARE PERFORMANCE; PREPARES SYSTEM PERFORMANCE & USAGE REPORTS.

**MAJOR WORKER CHARACTERISTICS:**

KNOWLEDGE OF COMPUTER SCIENCE; COMPUTER HARDWARE & PERIPHERAL EQUIPMENT; FUNCTIONS & CAPABILITIES OF SOFTWARE SYSTEMS; COMPUTER PROGRAMMING; JOB CONTROL & REPORT-GENERATING LANGUAGES; SOFTWARE & RELATED HARDWARE SYSTEMS. ABILITY TO READ & UNDERSTAND VARIETY OF TECHNICAL MATERIAL RELATED TO COMPUTER SOFTWARE & RELATED HARDWARE SYSTEMS; DEFINE PROBLEMS, COLLECT DATA, ESTABLISH FACTS & DRAW VALID CONCLUSIONS; COMMUNICATE VERBALLY ON TECHNICAL MATTERS; MOVE LIMBS/FINGERS EASILY TO OPERATE COMPUTER TERMINAL.

(\*)DEVELOPED AFTER EMPLOYMENT.

**MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:**

COMPLETION OF UNDERGRADUATE CORE PROGRAM IN COMPUTER SCIENCE WHICH INCLUDED STUDY IN ASSEMBLER, REXX, CLIST & COBOL LANGUAGES; 12 MOS. TRG. OR 12 MOS. EXP. IN SOFTWARE INSTALLATION & MAINTENANCE FOR MAINFRAME OPERATING SYSTEMS;

-OR 12 MOS. EXP. AS SYSTEMS PROGRAMMER 1, 64191.

-OR EQUIVALENT OF MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT NOTED ABOVE.

**TRAINING AND DEVELOPMENT REQUIRED TO REMAIN IN THE CLASSIFICATION AFTER EMPLOYMENT:**

NOT APPLICABLE.

**UNUSUAL WORKING CONDITIONS:**

WORK INVOLVES OPERATION OF COMPUTER TERMINAL FOR LONG PERIODS OF TIME.

<b>CLASS TITLE:</b> SYSTEMS PROGRAMMER 3	<b>CLASS NO.:</b> 64193	<b>BARG. UNITS:</b> 051
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**EFFECTIVE DATE:**

01/10/1999

**NEW EFFECTIVE DATE:**

**JOB DUTIES IN ORDER OF IMPORTANCE: (THESE DUTIES ARE ILLUSTRATIVE ONLY. INCUMBENTS MAY PERFORM SOME OR ALL OF THESE DUTIES OR OTHER JOB-RELATED DUTIES AS ASSIGNED.)**

EVALUATES, INSTALLS, TEST &/OR MAINTAINS VERY COMPLEX OPERATING SYSTEM SOFTWARE ON MAINFRAME COMPUTER IN ORDER TO MAXIMIZE COMPUTER RESPONSE TIME & TO ENHANCE OVERALL SYSTEM PERFORMANCE (I.E., PRE-INSTALLATION PLANNING; READS TECHNICAL COMPUTER SYSTEMS/SOFTWARE MANUALS & GUIDES; PERFORMS REGRESSION TESTING; INSTALLS NEW SOFTWARE PACKAGES/UPGRADES; MONITORS HARDWARE SOFTWARE RELEASES; RESTORES SYSTEM FOLLOWING MASSIVE SOFTWARE OR HARDWARE FAILURES; MAINTAINS SYSTEM SECURITY) & ASSISTS IN SYSTEM CAPACITY PLANNING, SYSTEM RECOVERY, TUNING & AVAILABILITY MANAGEMENT.

PROVIDES TECHNICAL ASSISTANCE TO MANAGEMENT & SYSTEM USERS; IDENTIFIES, ANALYZES & RESOLVES SOFTWARE PROBLEMS ASSOCIATED WITH TELEPROCESSING APPLICATIONS; CONTACTS VENDOR REPRESENTATIVE TO RESOLVE SYSTEM PROBLEMS; TRAINS PROGRAMMERS & COMPUTER OPERATIONS PERSONNEL IN USE OF SOFTWARE & HARDWARE; ANALYZES SYSTEM &/OR REGION DUMPS/ERROR MESSAGES.

WRITES EXIT ROUTINES &/OR PROGRAMS TO INTERACT WITH SYSTEM SOFTWARE; RECOMMENDS PROGRAMMING & OPERATING STANDARDS TO AID IN OPTIMUM SOFTWARE/HARDWARE PERFORMANCE; PREPARES SYSTEM PERFORMANCE & USAGE REPORTS; CONFERS & COORDINATES WITH NETWORK ADMINISTRATORS IN DESIGN & MAINTENANCE OF NETWORK OPERATING SYSTEMS; ANALYZES, DESIGNS & IMPLEMENTS DATA COMMUNICATION SERVICES AS ELEMENTS OF OVERALL OPERATING SYSTEM DESIGN.

**MAJOR WORKER CHARACTERISTICS:**

KNOWLEDGE OF COMPUTER SCIENCE; COMPUTER HARDWARE & PERIPHERAL EQUIPMENT; FUNCTIONS & CAPABILITIES OF SOFTWARE SYSTEMS; COMPUTER PROGRAMMING; SOFTWARE & RELATED HARDWARE SYSTEMS. ABILITY TO READ & UNDERSTAND VARIETY OF TECHNICAL MATERIAL RELATED TO COMPUTER SOFTWARE & RELATED HARDWARE SYSTEMS; DEFINE PROBLEMS, COLLECT DATA, ESTABLISH FACTS & DRAW VALID CONCLUSIONS; COMMUNICATE VERBALLY ON TECHNICAL MATTERS; MOVE LIMBS/FINGERS EASILY TO OPERATE COMPUTER TERMINAL.

(\*)DEVELOPED AFTER EMPLOYMENT.

**MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:**

COMPLETION OF UNDERGRADUATE CORE PROGRAM IN COMPUTER SCIENCE WHICH INCLUDED STUDY IN ASSEMBLER, REXX, CLIST & COBOL LANGUAGES; 2 YRS. TRG. OR 2 YRS. EXP. IN SOFTWARE INSTALLATION & MAINTENANCE FOR MAINFRAME OPERATING SYSTEMS;

-OR 12 MOS. EXP. AS SYSTEMS PROGRAMMER 2, 64192.

-OR EQUIVALENT OF MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT NOTED ABOVE.

**TRAINING AND DEVELOPMENT REQUIRED TO REMAIN IN THE CLASSIFICATION AFTER EMPLOYMENT:**

NOT APPLICABLE.

**UNUSUAL WORKING CONDITIONS:**

WORK INVOLVES OPERATION OF COMPUTER TERMINAL FOR LONG PERIODS OF TIME.

<b>CLASS TITLE:</b> SYSTEMS PROGRAMMER 4	<b>CLASS NO.:</b> 64194	<b>BARG. UNITS:</b> 051
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**EFFECTIVE DATE:**

01/10/1999

**NEW EFFECTIVE DATE:**

**JOB DUTIES IN ORDER OF IMPORTANCE: (THESE DUTIES ARE ILLUSTRATIVE ONLY. INCUMBENTS MAY PERFORM SOME OR ALL OF THESE DUTIES OR OTHER JOB-RELATED DUTIES AS ASSIGNED.)**

LEADS (I.E., PROVIDES WORK DIRECTION & TRAINING; COMPLETES PROJECT PLANS & MAKES ASSIGNMENTS AS INDICATED IN PLAN) TEAM OF LOWER-LEVEL SYSTEMS PROGRAMMERS &/OR OPERATIONS ANALYSTS OF OPERATING SYSTEMS SOFTWARE ON MAINFRAME COMPUTERS, PROVIDES TECHNICAL ADVICE & ASSISTANCE TO LOWER-LEVEL SYSTEMS PROGRAMMERS IN RESOLVING MORE DIFFICULT TECHNICAL PROBLEMS, ASSISTS IN DEVELOPING PROCEDURES & STANDARDS FOR WORK UNIT, ASSISTS IN SCHEDULING NEW INSTALLATIONS & LEADS DEVELOPMENT EFFORTS (E.G., OVERSEES OTHERS IN ANALYZING USER REQUIREMENTS, DEVELOPING CRITERIA FOR SELECTION OF NEW SOFTWARE & ASSISTING IN PROCUREMENT PROCESS TO OBTAIN NEW SOFTWARE).

INSTALLS, TESTS & MAINTAINS OPERATING SYSTEM SOFTWARE ON MAINFRAME COMPUTER IN ORDER TO MAXIMIZE COMPUTER RESPONSE TIME & TO ENHANCE OVERALL SYSTEM PERFORMANCE (I.E., PARTICIPATES IN PRE-INSTALLATION PLANNING; READS TECHNICAL COMPUTER SYSTEMS/SOFTWARE MANUALS & GUIDES; PERFORMS REGRESSION TESTING; INSTALLS NEW SOFTWARE PACKAGES/UPGRADES; MONITORS HARDWARE PERFORMANCE AS RESULT OF SOFTWARE CHANGES, RESTORES SYSTEM FOLLOWING MASSIVE SOFTWARE OF HARDWARE FAILURES; MAINTAINS SYSTEM SECURITY).

PROVIDES TECHNICAL ASSISTANCE TO MANAGEMENT & SYSTEM USERS; IDENTIFIES, ANALYZES & RESOLVES SOFTWARE PROBLEMS ASSOCIATED WITH TELEPROCESSING APPLICATIONS; CONTACTS VENDOR REPRESENTATIVES TO RESOLVE SYSTEM PROBLEMS; TRAINS PROGRAMMERS & COMPUTER OPERATIONS PERSONNEL IN USE OF SOFTWARE & HARDWARE; ANALYZES SYSTEM &/OR REGION DUMPS/ERROR MESSAGES; CONFERS & COORDINATES WITH NETWORK ADMINISTRATORS IN DESIGN & MAINTENANCE OF NETWORK OPERATING SYSTEMS; ANALYZES, DESIGNS & IMPLEMENTS DATA COMMUNICATION SERVICES AS ELEMENTS OF OVERALL OPERATING SYSTEM DESIGN.

**MAJOR WORKER CHARACTERISTICS:**

KNOWLEDGE OF COMPUTER SCIENCE; COMPUTER HARDWARE & PERIPHERAL EQUIPMENT; FUNCTIONS & CAPABILITIES OF SOFTWARE SYSTEMS; COMPUTER PROGRAMMING; SOFTWARE & RELATED HARDWARE SYSTEMS. ABILITY TO READ & UNDERSTAND VARIETY OF TECHNICAL MATERIAL RELATED TO COMPUTER SOFTWARE & RELATED HARDWARE SYSTEMS; DEFINE PROBLEMS, COLLECT DATA, ESTABLISH FACTS & DRAW VALID CONCLUSIONS; COMMUNICATE VERBALLY ON TECHNICAL MATTERS; MOVE LIMBS/FINGERS EASILY TO OPERATE COMPUTER TERMINAL.

(\*)DEVELOPED AFTER EMPLOYMENT.

**MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:**

COMPLETION OF UNDERGRADUATE CORE PROGRAM IN COMPUTER SCIENCE WHICH INCLUDED STUDY IN ASSEMBLER, REXX, CLIST & COBOL LANGUAGES; 30 MOS. TRG. OR 30 MOS. EXP. IN SOFTWARE INSTALLATION & MAINTENANCE FOR MAINFRAME OPERATING SYSTEMS;

-OR 6 MOS. EXP. AS SYSTEMS PROGRAMMER 3, 64193.

-OR EQUIVALENT OF MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT NOTED ABOVE.

**TRAINING AND DEVELOPMENT REQUIRED TO REMAIN IN THE CLASSIFICATION AFTER EMPLOYMENT:**

NOT APPLICABLE.

**UNUSUAL WORKING CONDITIONS:**

WORK INVOLVES OPERATION OF COMPUTER TERMINAL FOR LONG PERIODS OF TIME.