

STATE OF OHIO (DAS)CLASSIFICATION
SPECIFICATION**CLASSIFICATION SERIES:**

Programmer/Analyst

SERIES NO.:

6411

MAJOR AGENCIES:

All Agencies

EFFECTIVE DATE:

03/07/2004

SERIES PURPOSE:

The purpose of the programmer/analyst occupation is to design & write new &/or modify existing computer programs in order to facilitate goals & meet information & automation needs of agency users & other governmental agency or private sector users. At the lower levels, incumbents write simple computer programs under close supervision. At the middle levels, incumbents write computer programs & analyze/design computer systems.

Note: In some agencies, programmer/analysts will also operate microcomputers.

CLASS TITLE:

Programmer/Analyst 1

CLASS NUMBER:

64111

EFFECTIVE DATE:

03/26/1990

CLASS CONCEPT:

The entry level class works under immediate supervision & requires working knowledge of computer programming standards & methods in order to learn to write, test, debug & correct/modify simple/elementary computer programs & to assist higher-level programmer/analyst in program development or problem-solving.

CLASS TITLE:

Programmer/Analyst 2

CLASS NUMBER:

64112

EFFECTIVE DATE:

03/26/1990

CLASS CONCEPT:

The developmental level class works under general supervision & requires working knowledge of computer programming standards & methods in order to write, test, debug & correct/modify simple/elementary computer programs according to specific instructions & using high-level computer language.

CLASS TITLE:

Programmer/Analyst 3

CLASS NUMBER:

64113

EFFECTIVE DATE:

03/07/2004

CLASS CONCEPT:

The full performance level class works under direction & requires considerable knowledge of computer programming standards & methods in order to write computer programs independently & to analyze & design simple computer systems.

CLASS TITLE:

Programmer/Analyst 4

CLASS NUMBER:

64114

EFFECTIVE DATE:

03/26/1990

CLASS CONCEPT:

The advanced level class works under direction & requires thorough knowledge of computer systems analysis & programming standards & methods in order to write large & complex computer programs & to analyze & design large computer systems independently.

CLASS TITLE:

Programmer/Analyst 5

CLASS NUMBER:

64115

EFFECTIVE DATE:

03/26/1990

CLASS CONCEPT:

The second advanced level class works under direction & requires thorough knowledge of computer systems analysis & computer programming standards & methods in order to lead team of programmer/analysts in writing computer programs & to analyze & design large computer systems.

CLASS TITLE: Programmer/Analyst 1	CLASS NUMBER: 64111	BARGAINING UNIT: 14
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EFFECTIVE DATE:

03/26/1990

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.)

Attends seminars &/or classes for training in programming languages & techniques (i.e., purpose of training is to learn elemental program design) & researches & refers to programming standards manual or technical computer documentation to assist in program development or problem-solving.

Assists higher-level programmer/analysts in maintenance, modification &/or testing of existing computer programs; assists in problem analysis & correction; responds, under direction of supervisor, to requests from users for sample data extracts & special reports; assists in installation of system & training of end users & communicates ideas & problems regarding program development to supervisor.

Writes simple on-line &/or batch computer programs utilizing high-level computer language (e.g., COBOL, BASIC) &/or job control language (i.e., JCL); learns to develop, debug & test programs with assistance from higher-level programmer/analysts; writes basic program documentation to record function, purpose & specifications of programs & writes basic user documentation &/or instruction manuals.

MAJOR WORKER CHARACTERISTICS:

Knowledge of high-level language computer programming; multiplication, division, fractions, decimals & percentages. Skill in operation of computer terminal & peripheral equipment (e.g., printers, modems). Ability to interpret variety of instructions in written, oral, picture or schedule form; read technical manuals & instructions; gather, collate & classify information about data, people or things; cooperate with others on group projects; move limbs/fingers easily to perform manual functions repeatedly.

MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:

Completion of undergraduate program core coursework in computer science which must have included at least one course in each of following: job control language, high-level computer language (e.g., COBOL), computer programming & programming techniques, computer laboratory involving hands-on operation of computer hardware & peripheral equipment & algebra or equivalent course providing mathematical concepts for use in computer science.

-Or completion of associate degree program in computer science.

-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; overtime may be required.

CLASS TITLE: Programmer/Analyst 2	CLASS NUMBER: 64112	BARGAINING UNIT: 14
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EFFECTIVE DATE:
03/26/1990

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.)

Writes new &/or modifies existing computer programs (i.e., assignments are generally routine & simple in nature, but infrequently may involve writing medium to large programs) according to detailed program specifications or supervisory instructions utilizing high-level computer language (e.g., COBOL, BASIC), designs logical flow of programs & documents data flow with some assistance from higher-level programmer/analysts, debugs & tests program adequacy, recommends changes to programs, tests computer-generated outputs, writes job control language to create program parameters &/or to execute programs, writes program documentation & writes user documentation &/or instruction manuals.

Attends seminars &/or classes for training in programming languages & techniques or in new software developments (i.e., purpose of training is to develop & refine established programming skills & enable incumbent to write more difficult programs); researches & refers to programming standards manuals or technical computer documentation to assist in program development or problem-solving.

Answers inquiries from users & troubleshoots computer-related problems (e.g., incorrect output, hardware difficulties); trains users in use of programs & coordinates work with data entry &/or production staff.

MAJOR WORKER CHARACTERISTICS:

Knowledge of high-level language computer programming; computer hardware systems; algebra. Skill in operation of computer terminal & peripheral equipment (e.g., printers, modems). Ability to interpret variety of technical computer manuals & documentation; write computer program documentation & instruction manuals; communicate verbally on technical & non-technical matters; gather, collate & classify information about data, people or things; cooperate with others on group projects; move limbs/fingers easily to perform manual functions repeatedly.

MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:

Completion of associate degree program or undergraduate program core coursework in computer science which must have included at least one course in each of following: systems analysis & design, computer programming, structured programming techniques, telecommunications programming, high-level computer language (e.g., COBOL), computer laboratory involving hands-on operation of computer hardware & peripheral equipment, numerical analysis, flowcharting, algebra or comparable mathematics & fourth generation language (e.g., SUPRA, SAS, MANTIS); 6 additional mos. trg. or 6 mos. additional exp. in development &/or modification, testing & debugging of simple/elementary computer programs & operation of computer hardware & peripheral equipment.

-Or 6 mos. exp. as Programmer/Analyst 1, 64111.

-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; overtime may be required.

CLASS TITLE: Programmer/Analyst 3	CLASS NUMBER: 64113	BARGAINING UNIT: 14
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EFFECTIVE DATE:

03/07/2004

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.)

Writes new &/or modifies existing computer programs (i.e., assignments generally involve writing medium to large programs, but infrequently may involve writing large & complex programs) utilizing high- level computer language (e.g., COBOL, BASIC) on independent basis, designs logical flow of programs & sequential or index files, debugs & tests program adequacy, performs program functions (e.g., compile, file maintenance) with program utilities, tests computer-generated outputs, writes job control language to create program parameters &/or to execute programs, writes program documentation & writes user documentation &/or instruction manuals.

Analyzes & designs small or simple computer systems or portions of larger systems with some assistance from higher-level programmer/analyst or supervisor; analyzes user needs & existing functions; analyzes hardware & software alternatives & recommends selection to higher-level authority; writes system documentation &/or designs data base files.

Provides technical computer assistance/information to users, lower-level programmers &/or other staff; troubleshoots computer-related problems (e.g., incorrect output, hardware failures); performs routine maintenance &/or minor repairs to computer-related equipment (e.g., printers, cables) &/or installs equipment; trains users in use of programs & coordinates work with data entry &/or production staff.

Attends seminars &/or classes for computer programming-related training; researches & refers to programming standards manuals or technical computer documentation to assist in program development, system design &/or problem- solving & attends meetings to discuss projects, policies &/or procedures; assists lower-level programmer/analysts in computer programming.

MAJOR WORKER CHARACTERISTICS:

Knowledge of high-level language computer programming; computer systems analysis & design*; computer hardware systems; algebra. Skill in operation of computer terminal & peripheral equipment (e.g., printers, modems). Ability to interpret variety of technical computer manuals & documentation; write computer programs & system documentation & instruction manuals; communicate verbally on technical & non-technical matters; gather, collate & classify information about data, people or things; cooperate with others on group project; move limbs/fingers easily to perform manual functions repeatedly.

(*)Developed after employment.

MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:

6 mos. exp. as Programmer/Analyst 2, 64112.

-Or completion of associate degree program or undergraduate program core coursework in computer science which must have included at least one course in each of following: fourth generation language (e.g., SUPRA, MANTIS, SAS), high-level computer language (e.g., COBOL), systems analysis & design, telecommunications programming, computer laboratory involving on-hands operation of computer hardware & peripheral equipment, computer programming, structured programming techniques, flowcharting, numerical analysis & algebra or comparable mathematics; 12 mos. additional trg. or 12 mos. additional exp. in writing &/or modifying, testing & debugging simple/elementary computer programs of various size using high-level language.

-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; overtime may be required.

CLASS TITLE: Programmer/Analyst 4	CLASS NUMBER: 64114	BARGAINING UNIT: 14
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EFFECTIVE DATE:
03/26/1990

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.)

Writes new &/or modifies existing large & complex computer programs (Note: Refer to Programmer/Analyst 3 specification for general description of tasks performed. Large & complex programs involve low-level language programming like ASSEMBLER, or high-level programming for detailed & complicated scientific, engineering, statistical or mathematical applications requiring advanced programming logic &/or data base management system programming).

Analyzes & designs large computer systems on independent basis; analyzes user needs & existing functions; analyzes hardware & software alternatives; writes system documentation; develops system test data, monitors test results &/or designs data base files.

Provides technical computer assistance/information to users; assists &/or trains lower-level programmer/analysts in computer programming & systems design; troubleshoots & corrects computer-related problems; performs routine maintenance &/or installs equipment; trains users, coordinates work with data entry &/or production staff; researches & refers to technical computer manuals for problem resolution; attends training classes & seminars & attends meetings to discuss projects, policies &/or procedures.

MAJOR WORKER CHARACTERISTICS:

Knowledge of high-level language computer programming; computer systems analysis & design; computer hardware systems; algebra. Skill in operation of computer terminal & peripheral equipment (e.g., printers, modems). Ability to interpret variety of technical computer manuals & documentation; write computer program & system documentation & instruction manuals; communicate verbally on technical & non-technical matters; gather, collate & classify information about data, people or things; cooperate with others on group projects; move limbs/fingers easily to perform manual functions repeatedly.

MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:

Completion of associate degree program or undergraduate core program in computer science which included at least one course in each of following: fourth generation language (e.g., SUPRA, SAS, MANTIS), high-level computer language (e.g., COBOL), assembler language, systems analysis & design, telecommunications programming, computer laboratory involving hands-on operation of computer hardware & peripheral equipment, computer programming, structured programming techniques, flowcharting, numerical analysis & algebra or comparable mathematics; 1 course or 3 mos. exp. in relational database (e.g., DB2, IMS); 1 course or 3 mos. exp. in command level (e.g., CICS); 1 course or 3 mos. exp. in data & file structures (e.g., lists, trees, graphs, searching & sorting); 12 mos. additional trg. or 12 additional mos. exp. in writing &/or modifying, testing & debugging full range of computer programs (i.e., simple to complex & small to large) using high-level computer language.

-Or 6 mos. exp. as Programmer/Analyst 3, 64113.

-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; overtime may be required.

CLASS TITLE: Programmer/Analyst 5	CLASS NUMBER: 64115	BARGAINING UNIT: 14
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EFFECTIVE DATE:

03/26/1990

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 team of lower-level programmer/analysts (e.g., provides work direction & training) in developing & writing computer programs &/or in analyzing & designing computer systems, assigns & reviews work (e.g., program design, testing, documentation) for accuracy & completeness, trains lower-level programmer/analysts in work functions & standards, assists staff in solving problems & participates in developing unit standards, policies &/or procedures.

Writes new &/or modifies existing large & complex computer programs (Note: Refer to Programmer/Analyst 4 specification for general description of tasks performed).

Analyzes & designs large computer systems on independent basis; analyzes user needs & existing functions; analyzes hardware & software alternatives; writes system documentation; develops system test data, monitors test results &/or designs data base files.

Provides technical computer assistance/information to users; troubleshoots & corrects complex computer-related problems (e.g., data base design, major system errors); performs routine maintenance &/or minor repairs to computer equipment &/or installs equipment; trains users in use of programs & systems; coordinates work with data entry &/or production staff; researches & refers to technical computer manuals for problem resolution & guidance & attends meetings to discuss projects & to participate in development/revision of unit policies &/or procedures; attends training classes &/or seminars.

MAJOR WORKER CHARACTERISTICS:

Knowledge of high-level language computer programming; computer systems analysis & design; computer hardware systems; employee development & training*; algebra. Skill in operation of computer terminal & peripheral equipment (e.g., printers, modems). Ability to interpret variety of technical computer manuals & documentation; write computer program & system documentation & instruction manuals; communicate verbally on technical & non-technical matters; gather, collate & classify information about data, people or things; cooperate with others on group projects; move limbs/fingers easily to perform manual functions repeatedly.

(*)Developed after employment.

MINIMUM CLASS QUALIFICATIONS FOR EMPLOYMENT:

Completion of associate degree program or undergraduate core program in computer science which included at least one course in each of following: fourth generation language (e.g., SUPRA, SAS, MANTIS), high-level computer language (e.g., COBOL), assembler language, systems analysis & design, telecommunications programming, computer laboratory involving hands-on operation of computer hardware & peripheral equipment, computer programming, structured programming techniques, flowcharting, numerical analysis & algebra or comparable mathematics; 1 course or 3 mos. exp. in relational database (e.g., DB2, IMS); 1 course or 3 mos. exp. in command level (e.g., CICS); 1 course or 3 mos. exp. in data & file structures (e.g., lists, trees, graphs, searching & sorting); 18 mos. additional trg. or 18 additional mos. exp. in writing &/or modifying, testing & debugging full range of computer programs (i.e., simple to complex & small to large) using high-level & assembler languages.

-Or 6 mos. exp. as Programmer/Analyst 4, 64114.

-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; overtime may be required.