CLASS TITLE: MICROBIOLOGIST III

CHARACTERISTICS OF THE CLASS
Under supervision, performs at the fully functional level conducting microbiological testing and analysis functions, and performs related duties as required

ESSENTIAL DUTIES
- Prepares specimens for microscopic viewing using staining materials
- Performs complex microbiological tests on raw and treated water samples to identify pollution, bacteria, algae, and toxins
- Assesses water quality using samples collected from source water, water mains, purification plants, and water quality investigations
- Performs microscopic examinations of water to isolate, identify, assess, and study microorganisms
- Maintains records of research findings and prepares related reports
- Calculates, analyzes, and interprets tests results
- Conducts specialized research on water conditions
- Maintains and prepares biochemical substances used in analyses
- Transfers and incubates bacteria cultures for further study
- Acts as the team leader on special testing projects, as required
- Sterilizes and maintains laboratory equipment, instruments, and materials according to accepted standards, as required
- Demonstrates laboratory procedures at public educational exhibits, as required

NOTE: The list of essential duties is not intended to be inclusive; there may be other duties that are essential to particular positions within the class.

MINIMUM QUALIFICATIONS

Education, Training, and Experience
- Graduation from an accredited college or university with a Bachelor's Degree in Microbiology, Bacteriology, Biology, or a directly related field, plus one year of experience in microbiological analysis; or an equivalent combination of education, training and experience provided that the minimum degree requirement is met

Licensure, Certification, or Other Qualifications
- Employees are required to obtain Illinois Department of Public Health Laboratory Certification–Registry #17506 upon 6 months of employment

WORKING CONDITIONS
- Exposure to hazardous chemicals
- Exposure to microorganisms and infectious waste
- Exposure to fumes or dust
EQUIPMENT

- Standard office equipment (e.g., telephone, printer, photocopier, fax machine, calculator)
- Computers and peripheral equipment (e.g., personal computer, computer terminals, hand-held computer)
- Safety equipment
- Testing or monitoring equipment
- Microbiology equipment (e.g., microscopes, scientific calculators)
- Biological and chemical testing equipment (e.g., electron microscopes, light microscopes, x-ray analyzers)
- Laboratory equipment (e.g., sterilizers, scales, centrifuges)

PHYSICAL REQUIREMENTS

- Some moving or lifting laboratory equipment and supplies

KNOWLEDGE, SKILLS, ABILITIES, AND OTHER WORK REQUIREMENTS

Knowledge
Moderate knowledge of:
- applicable federal, state, local laws, regulations, and guidelines
- *laboratory practices and methodology
- *applicable computer software packages and applications
- *microbiological equipment, instruments, materials, and supplies
- *microbiological testing, research, and analytical practices and procedures
- *Biology

Knowledge of applicable City and department policies, procedures, rules, and regulations
Other knowledge as required for successful performance in the Microbiologist II class

Skills

- *ACTIVE LEARNING - Understand the implications of new information for both current and future problem-solving and decision-making
- *ACTIVE LISTENING - Give full attention to what other people are saying, take time to understand the points being made, ask questions as appropriate, and not interrupt at inappropriate times
- *CRITICAL THINKING - Use logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems
- *MATHEMATICS - Use mathematics to solve problems
- *SCIENCE - Use scientific rules and methods to solve problems
- *COMPLEX PROBLEM SOLVING – Identify complex problems and review related information to develop and evaluate options and implement solutions
- *COORDINATION WITH OTHERS - Adjust actions in relation to others' actions
- *QUALITY CONTROL ANALYSIS - Conduct tests and inspections of products, services, or processes to evaluate quality or performance
• **EQUIPMENT MAINTENANCE** - Perform routine maintenance on equipment and determine when and what kind of maintenance is needed

• **EQUIPMENT SELECTION** - Determine the kind of tools and equipment needed to do a job

Other skills as required for successful performance in the Microbiologist II class

**Abilities**

• **COMPREHEND ORAL INFORMATION** - Listen to and understand information and ideas presented through spoken words and sentences

• **SPEAK** - Communicate information and ideas in speaking so others will understand

• **COMPREHEND WRITTEN INFORMATION** - Read and understand information and ideas presented in writing

• **WRITE** - Communicate information and ideas in writing so others will understand

• **RECOGNIZE PROBLEMS** - Tell when something is wrong or is likely to go wrong

• **REASON MATHEMATICALLY** - Choose the right mathematical methods or formulas to solve a problem

• **MAKE SENSE OF INFORMATION** - Quickly make sense of, combine, and organize information into meaningful patterns

• **ORGANIZE INFORMATION** - Arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations)

Other skills as required for successful performance in the Microbiologist II class

All employees of the City of Chicago must demonstrate commitment to and compliance with applicable state and federal laws, and City ordinances and rules; the City’s Ethics standards; and other City policies and procedures.

The City of Chicago will consider equivalent foreign degrees, accreditations, and credentials in evaluating qualifications.

* May be required at entry.

City of Chicago
Department of Human Resources
July, 2014