



Code: 3177
Family: Health and Human Services
Service: Health and Welfare
Group: Medical and Social Service
Series: Medical Technician and Laboratory

CLASS TITLE: MICROBIOLOGIST II

CHARACTERISTICS OF THE CLASS

Under immediate supervision, performs entry-level microbiological analysis functions, and performs related duties as required

ESSENTIAL DUTIES

- Prepares specimens for microscopic viewing using staining materials
- Performs 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
- Prepares biochemical substances used in analyses
- Participates in specialized microbiological research on water conditions, 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, 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

Some knowledge of:

- applicable federal, state, local laws, regulations, and guidelines
- applicable computer software packages and applications
- *laboratory practices and methodology
- *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

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
- *MATHEMATICS - Use mathematics to solve problems
- *SCIENCE - Use scientific rules and methods to solve problems
- 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
- QUALITY CONTROL ANALYSIS - Conduct tests and inspections of products, services, or processes to evaluate quality or performance

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)
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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