State Hygienic Laboratory  
Environmental Microbiology  
Environmental Laboratory Analyst

University Classification:  **Environmental Laboratory Analyst**  
Job Code:  **PHB1**  
Pay Level:  **3A**  
Position #:  **00105202**  
Org/Dept/Sub-dept #:  **90-9050-00120**  
Position Reports to:  **Nancy Hall**  
Name  
Position #:  **0012966**  

**Position Specific Summary:**  
Perform routine and non-routine environmental microbiology testing on water, sludge, food, and environmental surface samples using approved methods, including appropriate quality control measures and documentation. Answer general inquiries from various individuals and county health department personnel regarding water test results, sample collection procedures, etc.

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<th>Classification</th>
<th>Specific Job Duties and Tasks</th>
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| **Sample/Specimen Preparation and Analysis** | - Perform sample accessioning within established holding times and evaluate samples for acceptability  
- Prepare and analyze routine bacteriology testing on environmental microbiology samples using various standardized procedures, principles, concepts and theories including quality control.  
- Suggest modifications or adapt established methods, procedures or techniques to resolve difficult or complex problems.  
- Operate as primary analyst for testing on a variety of matrices. |
| **Instrumentation and Technology** | - Perform daily operation and direct maintenance, training, troubleshooting and calibration of general laboratory instruments and equipment.  
- Perform complex chemical testing (nitrate) on the Lachat flow-injection system. Primary analyst. Evaluate in-control status of every run and trouble-shoot discrepancies. Perform routine maintenance and quality control including preparation of standards.  
- Adheres to relevant policies, QA/QC, and ethics for laboratory testing. |
| **Data Analysis, Reporting and Documentation** | - Document and review routine data analysis, procedures, and results.  
- Performs worksheet creation, completion, and release in Open Elis following approved procedures.  
- Knowledgeable of OE standard comments and QA events.  
- Complete and release routine data and reports after review of results and analysis of quality control.  
- Assist in writing new and annual review of existing standard operating procedures.  
- May prepare documentation for test validation reports. |
| **Quality Control, Quality Assurance and Quality Systems** | - Maintain and perform quality control and quality assurance procedures in accordance with established policies.  
- Document deviations, out-of-control situations, client complaints on section monthly reports or assessments.  
- Recommend corrective action and actively participate in section's process improvement actions.  
- Understands the importance of and performs root cause analysis. |
| Outreach and Communication | • Answer general inquiries from various individuals and county health department personnel regarding water test results, sample collection procedures, cost of analyses.  
• Routine interaction with clients, local agencies and county health department personnel regarding clarification or interpretation of water sample results.  
• Assist in the creation and design of outreach materials and participate in presentations to local environmental and general interest groups.  
• Understands the basic characteristics of good working relationships, demonstrating good teamwork as approachable, cooperative and using effective communication to contribute to an overall positive and productive work and team environment.  
• Demonstrates a willingness to carry out responsibilities and a positive approach to accomplishing work. |
| Human Resources | • May provide functional &/or administrative supervision of staff and or students. May provide direction, assignments, feedback to assure outcomes are achieved. |
| Financial Responsibility | • Initiate purchasing requests for supplies, equipment, etc.  
• Utilize laboratory resources appropriately to ensure financial sustainability |

Other duties as assigned.

**Universal Competencies**

| Positive Impact/Achieving Results | Ability to utilize existing resources and learning to achieve or exceed desired outcomes of current and future organizational goals/needs. Able to demonstrate ethical behavior in diverse situations while producing results. |
| Service Excellence/Customer Focus | Ability to meet or exceed customer service needs and expectations and provide excellent service in a direct or indirect manner. Ability to effectively transmit and interpret information through appropriate communication with internal and external customers. |
| Collaboration and Embracing Diversity | Ability to work with a variety of individuals and groups in a constructive and civil manner while appreciating the unique contribution of individuals from varied cultures, race, creed, color, national origin, age, sex, disability, sexual orientation, and gender identity. |

**Technical Competencies**

| Interpersonal Relationships | • Explains the benefits of maintaining positive working relationships with associates.  
• States the basic characteristics of good working relationships.  
• Describes the organizational culture for interacting with others.  
• Provides examples of individuals with good interpersonal skills and their specific skills. |
| Laboratory Equipment Operation | • Operates and calibrates laboratory equipment.  
• Examines equipment to detect signs of disrepair.  
• Helps others understand laboratory equipment safety and operating policies and procedures.  
• Documents defective equipment and reports it to an appropriate supervisor.  
• Utilizes quality control techniques to monitor and maintain laboratory equipment. |
| Laboratory Practice Quality Assurance (LPQA) | • Identifies the major concepts and stages of laboratory practice quality assurance.  
• Describes regulations and ethical standards governing the LPQA process. |
• Lists the basic technologies and equipment required for an effective LPQA program.
• Demonstrates awareness of the regulations affecting laboratory practice.

Laboratory Results Analysis and Reporting (Basic)

• Identifies the basic concepts, principles and types of laboratory results reporting.
• Identifies key objectives in reviewing and analyzing lab data.
• Names specific tools or techniques that can be used to support the analytical thinking process.
• Collects updated laboratory results for review and analysis.

Laboratory Testing (Working)

• Participates in collecting and processing specimens and samples according to test requests, standard operating procedures, and/or cGLP or comparable regulations.
• Operates laboratory equipment required to examine specimens.
• Produces reports based on laboratory test results to help in further diagnosis, treatment, research, surveillance, disease/contamination prevention, or determine quality of manufacturing process.
• Adheres to relevant policies and ethics for laboratory testing.
• Discusses major factors that can affect the accuracy of laboratory test results.

As part of performing the key areas of responsibility and competencies described above, staff members are expected to meet reasonable standards of work quality and quantity, as well as expectations for attendance established by their supervisor. Staff members are also expected to comply with policies governing employee responsibilities and conduct, including those contained in the University Operations Manual.

Proficiency levels are defined as:

Basic Application - Uses basic understanding of the field to perform job duties; may need some guidance on job duties; applies learning to recommend options to address unusual situations.

Working Experience - Successfully completes diverse tasks of the job; applies and enhances knowledge and skill in both usual and unusual issues; needs minimal guidance in addressing unusual situations.

Extensive Experience - Performs without assistance; recognized as a resource to others; able to translate complex nuances to others; able to improve processes; focus on broad issues.

Expert/Leader - Seen as an expert and/or leader; guides, troubleshoots; has strategic focus; applies knowledge and skill across or in leading multiple projects/orgs; demonstrates knowledge of trends in field; leads in developing new processes.

Position Qualifications

NOTE: Education OR experience may be increased or decreased by one level for most positions.

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<th>Education or Equivalency Required</th>
<th>A bachelor’s degree in Microbiology, Medical Technology or related biological science field or an equivalent combination of education and experience is required.</th>
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<td>Required Qualification</td>
<td>• Demonstrate a minimum of 6 months to one year of experience preparing and analyzing routine bacteriology testing on water or food samples using various standardized procedures, principles, concepts and theories including quality control; or applicable laboratory experience.</td>
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<td>• Demonstrate a minimum of 6 months to one year, of documenting, review and release of routine data and reports, after a review of results and of quality control.</td>
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<td>• Demonstrate good teamwork and interpersonal skills, including relationship management within the unit and outside the immediate work unit.</td>
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<td>• Ability to work in a high-volume, fast-paced environment.</td>
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<td>• Demonstrate excellent verbal and written communication skills.</td>
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<td>• Demonstrate basic math, computer, and Microsoft Excel skills.</td>
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<td>• Experience pipetting in a laboratory setting.</td>
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**Highly Desirable Qualification**

- Demonstrate an understanding of Environmental Microbiology sample testing (coliform bacteria in water; food pathogen analysis) and interpretations which include acceptance and holding times, dilution schemes, test performance characteristics, appropriate quality control, completion, and release of results.

**Desirable Qualification**

- Experience in bacterial culture and isolation techniques.
- Experience in microscopy.

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See requisition # 18001697 at [https://jobs.uiowa.edu](https://jobs.uiowa.edu) within Research Category

Applicable background checks will be conducted.

The University of Iowa is an equal opportunity/affirmative action employer. All qualified applicants are encouraged to apply and will receive consideration for employment free from discrimination on the basis of race, creed, color, national origin, age, sex, pregnancy, sexual orientation, gender identity, genetic information, religion, associational preference, status as a qualified individual with a disability, or status as a protected veteran.