

0403 – Microbiologist (Data Scientist)

Major Duties Required for This Position May Include:

- The incumbent has responsibility and serves as technical advisor for the administration and management of assigned projects and studies, including the direction and control of project planning, project review and findings.
- Consults and collaborates with statistical, data science, artificial intelligence (e.g., machine learning), and public health professionals in the collection, linkage, processing, coding, classification, mining and analysis of public health surveillance, research, and administrative health data.
- Brings and develops expertise in the fields of health science, artificial intelligence (e.g., machine learning), and programming languages as applied to public health.
- Prepares comprehensive reports that include discussion of substantive issues related to data science methodology for public health surveillance and related applications.

Related Competencies

- Public Health Knowledge
- Program Assessment
- Research Translation

Basic Requirements

Degree in microbiology, biology, chemistry, or basic medical science that included at least 20 semester hours in microbiology and other subjects related to the study of microorganisms, and 20 semester hours in the physical and mathematical sciences combining course work in organic chemistry or biochemistry, physics, and college algebra, or their equivalent.

Or

Combination of education and experience that includes courses equivalent to a major in microbiology, biology, chemistry, or basic medical science that included courses as shown above, plus appropriate experience or additional education.

Minimum Qualifications

In addition to meeting the basic requirements above, to qualify for this position you must also meet the qualification requirements listed below:

GS-07 Specialized Experience Requirements

You must have one year of specialized experience at a level of difficulty and responsibility equivalent to the GS-05 grade level in the Federal Service. Specialized experience for this position includes:

- Gathering data to support work in various scientific and public health areas associated with numerous microorganisms and biological agents.

Or Education

One full year of graduate level education.

Or Superior Academic Achievement

Based on a bachelor's degree that is demonstrated through class standing (upper 1/3 of class); grade point average (3.0/4.0 overall or 3.5/4.0 in major), or election to membership in a qualifying national scholastic honor society.

Or Combination

You may qualify on a combination of education and experience, the total percentage of experience at the required grade level compared to the specialized experience requirement, as well as the percentage of completed education compared to the educational requirement must equal at least 100 percent.

GS-09 Specialized Experience Requirements

You must have one year of specialized experience at a level of difficulty and responsibility equivalent to the GS-07 grade level in the Federal Service. Specialized experience for this position includes:

- Gathering data from multiple sources, data processing, exploratory data analysis in scientific and public health areas associated with numerous microorganisms and biological agents.

Or Education

2 years of progressively higher-level graduate education leading to a master's degree *or* master's or equivalent graduate degree if related. **TRANSCRIPTS REQUIRED.**

Or Combination

You may qualify on a combination of education and experience. The total percentage of experience at the required grade level compared to the requirement, must equal at least 100 percent. Only graduate level education more than the first 18 semester hours (27 quarter hours) may be combined to be considered for qualifying education. **TRANSCRIPTS REQUIRED.**

GS-11 Specialized Experience Requirements

You must have one year of specialized experience at a level of difficulty and responsibility equivalent to the GS-09 grade level in the Federal Service. Specialized experience for this position includes:

- Gathering data from multiple sources, data processing, exploratory data analysis, anomaly detection, measurement, unstructured data analysis, interpretation of findings, in microbiology with emphasis on public health.

Or Education

Ph.D. or equivalent doctoral degree *or* three (3) full years of progressively higher-level graduate education. **TRANSCRIPTS REQUIRED.**

Or Combination

You may qualify on a combination of education and experience. The total percentage of experience at the required grade level compared to the requirement, must equal at least 100 percent. Only graduate level education more than the first 36 semester hours (54 quarter hours) may be combined to be considered for qualifying education. **TRANSCRIPTS REQUIRED.**

GS-12 Specialized Experience Requirements

You must have one year of specialized experience at a level of difficulty and responsibility equivalent to the GS-11 grade level in the Federal Service. Specialized experience for this position includes:

- Performing data science work that requires extraction of knowledge from public health surveillance systems and programs at the local, state, and national levels.

Note: There is no substitution of education for specialized experience at the GS-12 level.

GS-13 Specialized Experience Requirements

You must have one year of specialized experience at a level of difficulty and responsibility equivalent to the GS-12 grade level in the Federal Service. Specialized experience for this position includes:

- Providing technical consultation and assistance to Federal, state, local and other health agencies concerning various complex microbiology projects.

Note: There is no substitution of education for specialized experience at the GS-13 level.

GS-14 Specialized Experience Requirements

You must have one year of specialized experience at a level of difficulty and responsibility equivalent to the GS-13 grade level in the Federal Service. Specialized experience for this position includes:

- Performing advanced data science work that requires extraction of knowledge from public health surveillance systems and programs at the local, state, and national levels.

Note: There is no substitution of education for specialized experience at the GS-14 level.

Experience refers to paid and unpaid experience. Examples of qualifying unpaid experience may include volunteer work done through National Service programs (such as Peace Corps and AmeriCorps), as well as work for other community-based philanthropic and social organizations. Volunteer work helps build critical competencies, knowledge, and skills; and can provide valuable training and experience that translates directly to paid employment. You will receive credit for all qualifying experience, including volunteer experience.