1520 – Mathematician

Major Duties Required for This Position May include:

- Conducting research on basic mathematical principles, methods, procedures, techniques, or relationships
- Developing mathematical methods to solve a variety of scientific, engineering, economic problems where precise specification of the relationships, rigor and economy of mathematical operations, and logical deduction are the controlling considerations.
- Compiles detailed work plans showing milestones, and a backup of personnel and budgetary, needs when dealing with projects.
- Prepare evaluation of test activities and adapt and apply existing mathematical methods and techniques in a specialized branch of mathematics to specific subject matter applications while recommending the most efficient means for conducting the research.

Related Competencies

- Data Analysis and Interpretation
- Data Monitoring
- Data and Information Management
- Advising and Consulting

Basic Requirements

**Degree** in mathematics or the equivalent of a major that included at least 24 semester hours in mathematics.

Or

**Combination of education and experience** that include courses equivalent to a major in mathematics (including at least 24 semester hours in mathematics), as shown in above, plus appropriate experience or additional education.

Minimum Qualifications

In additions to meeting the basic requirements above, applicants must meet the minimum qualifications requirement as defined below:

**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:

- Utilizing an intense application of specialized methods and techniques of the required field of mathematics.
- Gathering, analyzing, and processing of data and information to support work efforts.
**Or Education**
Ph.D. or equivalent doctoral degree or three (3) full years of progressively higher-level graduate education leading to such a degree or LL.M., 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 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:

- Advising and providing technical assistance to scientific, engineering, mathematical and managerial personnel on the mathematical aspects of work.

**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:

- Reviewing scientific and mathematical studies and papers and convert results into practical recommendations and procedures.

**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:

- Formulating, conducting, organizing, and directing highly creative and independent research programs
- Defining and selecting basic problems for investigation based on needed improvements to the state of the art in mathematical modeling.

**Note:** There is no substitution of education for specialized experience at the GS-14 level.
**GS-15 Specialized Experience Requirements**

You must have one year of specialized experience at a level of difficulty and responsibility equivalent to the GS-14 grade level in the Federal Service. Specialized experience for this position includes:

- Providing operational and scientific expertise to explore basic research initiatives for a new generation.
- Overseeing policy development, plans, and operations in critical research initiatives and advanced technologies for future precision capabilities on a continuing or project basis.

**Note:** There is no substitution of education for specialized experience at the GS-15 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.