0801 – General Engineer

Major Duties for This Position May Include:

- Provides advice, consultation, and recommendations to management on the need to include the subject matter expertise and involvement of engineers in other engineering science disciplines such as electrical, mechanical, civil, etc.
- Performs scheduling and layout of operations and inspection and surveillance of materials, methods, and equipment used in construction.
- Develops technical data regarding materials, sizes, qualities, dimensions, quantities, and costs to be incorporated into formal specifications.
- Provides guidance, development and coordination for the planning, engineering design, and oversight of maintenance projects.

Related Competencies

- Project Management
- General Engineering
- Decision Making
- Data Analysis

Basic Requirements

Successful completion of a degree in engineering. To be acceptable, the program must:

1. Lead to a bachelor's degree in a school of engineering with at least one program accredited by the Accreditation Board for Engineering and Technology (ABET)
2. Or include differential and integral calculus courses (more advanced than first-year physics and chemistry) in five of the following seven areas of engineering science or physics:
    a. Statics, dynamics
    b. Strength of materials (stress-strain relationships)
    c. Fluid mechanics, hydraulics
    d. thermodynamics
    e. Electrical fields and circuits
    f. Nature and properties of materials (relating particle and aggregate structure to properties)
    g. Any other comparable area of fundamental engineering science or physics, such as optics, heat transfer, soil mechanics, or electronics.

Or

A combination of college-level education, training and/or technical experience that furnished

1. A thorough knowledge of the physical and mathematical sciences underlying professional engineering, and

2. A good understanding, both theoretical and practical, of the engineering sciences and techniques and their applications to one of the branches of engineering. The adequacy of such background must be demonstrated by one of the following:
    - **Professional registration or licensure** - Current registration as an Engineer Intern (EI), Engineer in Training (EIT), or licensure as a Professional Engineer (PE) by any State, the District of Columbia, Guam, or Puerto Rico. Absent other means of qualifying under this standard, those applicants who achieved such registration by means other than written test (e.g., State grandfather or eminence provisions), are eligible only for positions that are within or closely related to the specialty field of their registration.
    - **Written Test** - Evidence of having successfully passed the Fundamentals of Engineering (FE) examination or any other written test required for professional registration by an engineering licensure board in the various States, the District of Columbia, Guam, and Puerto Rico.
    - **Specified Academic Courses** - Successful completion of at least 60 semester hours of courses in the physical, mathematical, and engineering sciences and that included the courses specified in the basic requirements. The courses must be fully acceptable toward meeting the requirements of an engineering program as described in A above.
    - **Related Curriculum** - Successful completion of a curriculum leading to a bachelor's degree in an appropriate scientific field, (e.g., engineering technology, physics, chemistry, architecture, computer science, mathematics, hydrology, or geology, may be acceptable in lieu of a bachelor's degree in engineering, provided the applicant has had at least 1 year of professional engineering experience acquired under professional engineering supervision and guidance. Ordinarily there should be either an established plan of intensive training to develop professional engineering competence, or several years of prior professional engineering-type experience, e.g., in interdisciplinary positions. (The above examples or related curricula are not all-inclusive.)

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:

- Conducting tests to evaluate personal protective technology (PPT) and preparing written documents for presentations.

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:

- Conducting laboratory and field investigations to evaluate personal protective technology (PPT), identify mechanism failures, and establish safety procedures.

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:

- Planning, designing, and construction of new and/or extension, conversion, or modernization of existing buildings and/or facilities
- Experience serving as project manager or construction manager for various types of facilities
- Advising and consulting on engineering and construction issues

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:

- Conducting or overseeing occupational safety and health research or consultation related to the construction sector.

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 oversight and technical advice in the planning, development and implementation of projects related to occupational safety and health issues in the construction sector with national and international impact.

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.