

General Position Qualifications: General Engineer

As an entry level General Engineer at TSA, you will apply your knowledge of engineering principles, theories and concepts to perform a mixture of work assignments as a part of a team. Your work will cover a variety of duties including providing input on design work, assisting with routine field inspections, conducting trend analysis with engineering data, developing technical requirements for security equipment/systems, as well as performing engineering tests by applying well-established methods and procedures.

The general position qualifications for General Engineer position through the Career Resident Program are outlined below. To be eligible for the General Engineer position, you must be able to demonstrate in your application how you meet these general qualifications.

Basic Requirements (must meet A or B):

A. Bachelor's or higher degree in professional engineering. To be acceptable, the curriculum must: (1) be in a school of engineering with at least one curriculum accredited by the Accreditation Board for Engineering and Technology (ABET) as a professional engineering curriculum; or (2) include differential and integral calculus and 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); and (g) any other comparable area of fundamental engineering science or physics, such as optics, heat transfer, soil mechanics, or electronics.

OR

B. Combination of education and experience--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:

1. Professional registration--Current registration as a professional engineer 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. For example, an applicant who attains registration through a State Board's eminence provision as a manufacturing engineer typically would be rated eligible only for manufacturing engineering positions.

(Qualifications Continued on Reverse Side)

2. Written Test- Evidence of having successfully passed the Engineer-in-Training (EIT) examination, or the written test required for professional registration, which is administered by the Boards of Engineering Examiners in the various States, the District of Columbia, Guam, and Puerto Rico.
Applicants who have passed the EIT examination and have completed all the requirements for either (a) a bachelor's degree in engineering technology (BET) from an accredited college or university that included 60 semester hours of courses in the physical, mathematical, and engineering sciences, or (b) a BET from a program accredited by the Accreditation Board for Engineering and Technology (ABET) may be rated eligible for certain engineering positions at GS-5. Eligibility is limited to positions that are within or closely related to the specialty field of the engineering technology program. Applicants for positions that involve highly technical research, development, or similar functions requiring an advanced level of competence in basic science must meet the basic requirements in paragraph A.
3. Because of the diversity in kind and quality of BET programs, graduates of other BET programs are required to complete at least 1 year of additional education or highly technical work experience of such nature as to provide reasonable assurance of the possession of the knowledge, skills, and abilities required for professional engineering competence. The adequacy of this background must be demonstrated by passing the EIT examination.
4. Specified academic courses--Successful completion of at least 60 semester hours of courses in the physical, mathematical, and engineering sciences and in engineering that included the courses specified in the basic requirements. The courses must be fully acceptable toward meeting the requirements of a professional engineering curriculum as described in paragraph A.
5. Related curriculum--Successful completion of a curriculum leading to a bachelor's degree in engineering technology or in an appropriate professional field, e.g., physics, chemistry, architecture, computer science, mathematics, hydrology, or geology, may be accepted in lieu of a 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 of related curricula are not all-inclusive.)