

ENGINEERING STUDENT INTERN

DEFINITION

Under close supervision of a professional engineer, architect, surveyor, supervising inspector or supervising engineering technician in a learning capacity, performs a variety of basic technical and sub-professional engineering support work in the field and in the office; performs related work as required.

DISTINGUISHING CHARACTERISTICS

Employment in this class is restricted to students enrolled full-time in an accredited college or university curriculum leading to a bachelor's degree or advanced degree in civil, mechanical, electrical, or environmental engineering, surveying or architecture. It provides an opportunity for students to become familiar with the practical application of engineering theory during the course of their educational studies and during the short periods of time following the completion of the semester or quarter. No full-time permanent appointments will be made from this class.

EXAMPLES OF DUTIES (Illustrative Only)

- Performs a variety of basic technical engineering support work in the design and construction of public works, roads, bridges, drainage, capital improvements projects, and related areas.
- Performs the preparation and review of basic plans, profiles, and other designs for a variety of simple public works projects from engineer's instructions and notes.
- Prepares graphic displays, organization charts, and similar materials.
- Prepares and maintains master files of drawings, maps, and specifications, researching and updating information as needed.
- Assists with and participates in the preparation of estimates and specifications.
- Assists with and participates in construction inspection and project administration on projects, including estimates, payroll monitoring, construction oversight, and related assignments.
- Checks for compliance with applicable plans, specifications and standards.
- Performs basic field and office work related to property and right-of-way boundaries, including the research of records and files and the preparation of property descriptions and maps.
- Performs the checking of survey, parcel, and final maps for compliance with applicable laws, ordinances, and established survey practices.
- Performs drafting and mapping assignments using manual or computer aided methods.
- Participates as a member of a survey crew, performing calculations and rod, chain, and instrument work.
- Performs the sampling and testing of construction materials and soils, both in the laboratory and in the field.
- Provides information to the public, contractors, engineers, developers, and representatives of other government agencies, within the limits of knowledge and experience with the organization.
- Makes a variety of basic engineering and mathematical computations and calculations.
- Uses a computer and electronic calculator to solve a variety of engineering related problems.
- Assist with the preparations and maintenance of accurate records, correspondence, technical or narrative reports.

QUALIFICATIONS

Knowledge of:

- o Principles, practices, and terminology of a variety of engineering technical support work including drafting, mapping, design, construction, survey, materials testing, permit approval, and field inspection.
- o Basic engineering mathematical computations.
- o Data collection and analysis.
- o Uses of computers and computer applications related to engineering work.
- o Standard office practices and procedures, including written communications.

Skill in:

- o Performing basic engineering office and field support work in a variety of areas.
- o Using drafting materials and equipment to prepare skilled layouts, maps, and graphic materials.
- o Analyzing and evaluating engineering and statistical data and information, developing sound recommendations.
- o Developing accurate records, sketches, and notes.
- o Preparing correspondence, notes, and other written materials.
- o Interpreting and reading basic engineering plans and specifications.
- o Following complex written and oral technical instructions.
- o Making accurate mathematical and engineering calculations and computations.

Other Requirements:

Possession of a valid driver's license. Must be willing to work outdoors in a variety of weather conditions. Some positions require lifting and carrying of objects weighing up to sixty (60) pounds.

Education and Experience:

Engineering Student Intern: Current full-time enrollment in an accredited college or university leading to a bachelor's degree in civil, mechanical, electrical, or environmental engineering, surveying or architecture. .

Note: The above qualifications are an example of a typically accepted way of obtaining the requisite knowledge and skills.