

Code: 2311

Title: ENGINEERING INTERN

SUMMARY: This classification performs subprofessional engineering work under technical supervision in a specialized area requiring the development and application of engineering or related discipline principles, practices and techniques. This classification is typically used for an engineering or a related discipline internship to provide training and educational opportunities for current college/university students, while providing needed subprofessional engineering support to the affected Department.

DUTIES/RESPONSIBILITIES: (Work assignments may vary depending on the department's needs and will be communicated to the applicant or incumbent by the supervisor.)

Participates with professional engineering staff in the design and construction of public works projects;
Assists professional and paraprofessional engineering and planning staff in the collection, processing and evaluation of pertinent field and technical data for assigned projects;
Conducts field surveys, analysis and inspections of proposed sites or in-progress public works projects for compliance with plans and specifications;
Researches technical and statutory references for engineering and related information required to facilitate engineering and related activities;
Obtains samples and performs appropriate tests of water, effluents, soil, asphalt, concrete and related natural and construction materials;
Performs engineering drafting (manual and computer-aided) to include plotting, survey notes, cross-sections, profiles and improvements;
Enters, processes and evaluates data in automated/computer-based systems;
Prepares cost estimates and calculates materials lists for assigned projects;
Investigates, documents and performs preliminary analysis of data related to unique engineering problems;
Assists in the review of subdivision improvement plats, plans, specifications and related materials;
Documents activity in manual and computer-based files and databases;
Meets with technical supervisor to assess individual progress in assigned technical area and to identify educational and training goals to be achieved;
May assist in the training of paraprofessional engineering or related staff in new or special techniques in area of assignment.

KNOWLEDGE & SKILLS:

Knowledge of:

- principles of mathematics, physical and engineering sciences appropriate to the area of assignment;
- generally accepted industry and engineering standards, practices and techniques in area of assignment;
- technical and statutory resources available to facilitate engineering studies and related activities;
- principles and practices of documenting engineering and related activity;
- capabilities and applications of computer-based resources to support engineering activities.

Skill in:

- performing sub-professional engineering tasks, which may include:
 - performing and documenting field-survey work;
 - compiling, collating and entering field-survey and related data into a computer-based system;
 - collection, processing and testing of materials appropriate to area of assignment;
- reading and interpreting engineering plans, drawings, specifications and standards;
- performing mathematical and other engineering calculations appropriate to the area of assignment;
- manual and computer-based drafting techniques;
- preparing and presenting reports of activity;
- communicating effectively.

MINIMUM QUALIFICATIONS:

Current enrollment in an accredited college or university at the undergraduate or graduate level in an engineering (e.g., mechanical, civil, electrical) or related discipline appropriate to department's needs (e.g. Hydrology, Environmental Sciences, Architecture, Watershed Management, Transportation, Soil & Water Science, etc.).

OTHER REQUIREMENTS:

Licenses and Certificates: A valid Arizona Class D Operator License may be required for some positions at the time of appointment.

Physical/Sensory Requirements: Physical and sensory abilities will be determined by position.

This class specification is intended to indicate the basic nature of positions allocated to the class and examples of typical duties that may be assigned. It does not imply that all positions within the class perform all of the duties listed, nor does it necessarily list all possible duties that may be assigned.

Pima County

10/25/98(fn)