Class Concept

Work in this class involves the analysis, planning and design of large and complex communications network systems for agencies and institutions. Employees provide highly skilled technical assistance to departments or agencies in network planning, engineering and architecture. Duties include assessing communications network system and software needs, developing an optimal network design, developing technical standards and interface applications, and evaluating equipment necessary to establish, maintain or expand the communications network system. Employees conduct feasibility studies for large complex projects, develop requests for proposal, evaluate vendor products and make recommendations for selection, and provide resolution for network problems. Work is performed under the general direction of a Network Manager. Employees function as a technical consultant to departments or agencies in developing or upgrading their communications capabilities and connecting their network systems to external communications networks. Network systems are usually very large and include multivendor equipment, a variety of communications media and multiple agency or departmental networks that are connected together. Work involves analyzing numerous software and hardware options to assure functionality, reliability, economy, compatibility, and manufacturer or vendor credibility. The majority of the communications problems require analysis of several alternative systems configurations and methodologies to maintain network integrity and limit user down time.

Recruitment Standards

Knowledge, Skills, and Abilities

- Thorough knowledge of telecommunications network software and hardware and the full range of network system requirements.
- Ability to prepare bid specifications and proposals.
- Ability to manage projects through implementation.
- Ability to resolve a variety of network operational problems.
- Ability to analyze and design network systems using the application of electronic and communications principles, communications protocols and network topologies.
- Considerable knowledge of telecommunications network concepts, architecture, protocols, transport systems, and communications hardware and software.
- Considerable knowledge of digital electronics, communications systems design and integrated circuit component technology.
- Ability to evaluate vendor equipment, design and fabricate network component parts and diagnose and resolve network operations problems.
- Considerable knowledge of telecommunications network software and hardware and the full range of network system requirements.
- Knowledge of a variety of network operational problem determination procedures and techniques.

Minimum Education and Experience

Bachelor's degree in Computer Science, Computer Information Systems, Computer Engineering, Electronics, or related technical degree from an appropriately accredited institution and two years of progressive experience in telecommunications network management, analysis, or design, or traffic engineering; or

Bachelor's degree from an appropriately accredited institution and three years of networking related experience such as network design, analysis or network management; or

Associate's degree in Electronics or Networking Technology from an appropriately accredited institution and three years of networking related experience; or an equivalent combination of education and experience.

Note: This is a generalized representation of positions in this class and is not intended to identify essential functions per ADA.