CLASS FUNCTION:

The majority of duties performed in this IT Broadband class include support of voice, data and/or video networks in differing stages of development, maintenance, and modification. Specific duties will vary according to the life cycle and the technical complexity of the network and associated hardware and software. The range of duties may include the planning, design, engineering, programming, maintenance and management of networks. Networks may include local area, wide area or comparable transmission networks, positions in this IT Broadband class are primarily responsible for the design and implementation of networks as opposed to service coordination of externally developed and owned systems.

Positions in this IT Broadband class typically reside in a central computing department, instructional media areas, or in the central telecommunications department. Positions may also be located in administration or academic departments based on need and the complexity of the network system.

Within this IT Broadband class a full continuum of position complexity and competency from entry level to expert are represented. Within this IT Broadband class there will be positions of varying levels of technical complexity based on departmental need. Positions may also function as working supervisors with a full range of permanent supervisory responsibilities or may act as team or project leads. Positions may direct or supervise positions in this class or in other classes.

TYPICAL DUTIES:

The following are typical activities of positions in the Network Engineer IT Broadband class. Actual functions performed will differ from position to position and will be determined by specific work assignment. A position in this IT Broadband class has the majority of its work assignments in one or more of the following functions:

Typical network design and implementation duties:

Plan, design and engineer network installations to meet information processing and traffic needs. Develop systems and/or network configurations, including hardware, software, and integration requirements. Determine network architecture, topology, and transmission media appropriate for the installation. Develop/recommend network standards and protocols. Design networked facilities (e.g., studios, classrooms, teleconference facilities). Evaluate user needs, systems, and new technologies to recommend the most effective communication and transmission systems. Research and evaluate network/systems, performance capacity, and compatibility with existing systems. Analyze and recommend system elements such as system cabling and software and expansion capacity. Coordinate network development activities with systems as appropriate. Act as the technical liaison for network product or system vendors.
Typical network administration and coordinator duties:

Administration of assigned network to optimize and access to telecommunications and related networks. Install, configure, maintain, and support network equipment and network operating systems (e.g., routers, bridges, servers, switches, and/or port connectors). Provide or order network connectivity, ensuring appropriate integration of data, voice, and video networks. Recommend and modify network configuration to improve efficiency and cost effectiveness. Configure network and/or third party software application programs to provide improved response time, quality, or cost effectiveness. Recommend network database policies and procedures. Ensure that the network is fully operational and appropriately integrated for access with other systems. Customize or develop reports from network control. Develop interface programs. Ensure compliance with industry regulations (e.g., FCC) and with industry and campus standards.

Typical network engineer duties:

Analyze and monitor network activity to ensure optimal network operation. Monitor network traffic, usage, and performance. Assist in monitoring network database integrity. Run diagnostics to forecast performance thresholds. Perform analysis of network efficiency (e.g., channel, trunks, etc.) and traffic routing and troubleshoot system failures, referring to vendor or technicians as appropriate. Maintain network security and implement disaster recovery procedures. Perform conversions and system backups. Ensure adequate inventory of network supplies.

QUALIFICATIONS GUIDE:

Minimum Qualifications for this band: Bachelor’s degree in Computer Science, Information Technology, Engineering, or related degree and three (3) years of experience; or an Associate’s degree with five (5) years of experience; or a combination of relevant education and seven (7) years of experience.

Individuals this class will typically possess knowledge and/or applied skills and abilities in technical information network systems, telecommunications and transmissions technologies, including network architecture, topologies, protocols, programming applications and interfaces appropriate to the defined work area and assignments. Depending on departmental needs and the specific work assignment, a background and/or vendor training or licensure in computer operating systems, broadcast network functions, or telecommunications switching systems may be required. Position assignment also may require significant experience in supervision, project management, advanced network systems and analysis and design, and/or advanced telecommunications systems experience.

Specific qualifications including knowledge, skills, abilities and education will differ from position to position as work assignments vary.