

<b>GEORGETOWN UNIVERSITY</b>		PIN:
<b>INFORMATION TECHNOLOGY POSITION DESCRIPTION</b>		Date:
CLASS TITLE: <b>TECHNOLOGY ENGINEER</b> Possible Functional Titles: Network Engineer I, II, or III		
Please check one: <input type="checkbox"/> New <input type="checkbox"/> Revised <input type="checkbox"/> Updated for files only		

**A. General Information:**

Name of Incumbent:		
Class Code:    2273	Departmental Position Title:	
Supervisor (Name, Title and Phone):		
Home Dept.#:	Dept. Name:	
Cost Center(s):		
Is this a Term position?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If Yes, Exp. Date:
Number of months per year:	Number of hours per week:	

**B. Position Summary:** *This should explain why the position exists. Choose one level only.*

<p><input type="checkbox"/> <b>Entry level</b> responsibilities could include assisting with or performing at the most basic level, a variety of tasks involved with installation, maintenance, trouble-shooting , and configuration of computer networks, including cable, hubs, routers, and other network electronics, connected desktop and laptop computers, network interface cards, and other network peripherals. Work assignments would mainly be of <b>minimal complexity</b>, and position would work under <b>immediate supervision</b>.</p> <p><input type="checkbox"/> <b>Intermediate level</b> responsibilities would include variety of tasks of <b>semi-complexity</b> involved with the procurement, design, installation, maintenance, trouble-shooting , configuration, and administration of a computer networks, including cable, hubs, routers, and other network electronics, connected desktop and laptop computers, network interface cards, and other network peripherals. Position works under <b>moderate</b> supervision.</p> <p><input type="checkbox"/> <b>Advanced level</b> responsibilities would include variety of <b>complex</b> tasks involved with the procurement, design, installation, maintenance, trouble-shooting , configuration, and administration of a computer networks, including cable, hubs, routers, and other network electronics, connected desktop and laptop computers, network interface cards, and other network peripherals. <b>Functions with periodic direction and little guidance from supervisor.</b></p> <p><input type="checkbox"/> <b>Lead position</b> works with independence on a variety of <b>complex</b> tasks as outlined above. Functions as work leader or supervisor of lower levels. May be put in charge of projects. Position works under <b>very general supervision and periodic direction.</b></p>
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**C. Organizational Characteristics:** *Please attach organizational chart.*

Organizational Unit:
Reporting Responsibilities:
Supervisory Responsibilities:

**D. Principal Accountabilities: Duties listed are progressive. Select only those duties which directly apply to the position you are describing. You may expand on the wording of a function to meet the needs of your position. Indicate percentage of effort (time) required. Percentages must equal 100%. You must check whether an accountability is Essential (E) or Non-Essential (NE) for Americans with Disabilities Act purposes. Please check whether task is performed (D)aily, (W)eekly, (M)onthly or on a (P)eriodic basis.**

<b>□1. ( %)</b>		<b>Network Hardware Support</b>	
<b>□E □NE</b>	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P		Identify simple desktop or server configuration problems with help.
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P		Understand the client-server environment well enough to distinguish between application problems and network problems.
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P		Understands the network and can isolate the problems quickly. Participates in problem resolution teams.
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P		With assistance from a more experienced engineer, can differentiate complex application problems from network problems.
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P		Understands the client-server environment well enough to differentiate <b>complex</b> application problems from network problems.
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P		With assistance, may perform troubleshooting, diagnostic, and maintenance actions on Network hardware.
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P		Perform troubleshooting, diagnostic, and maintenance actions on Network hardware.
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P		With assistance, may install new network systems or upgrade current systems, or components including cable and network electronics.
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P		Installs new network systems or upgrade current systems, or components including cable and network electronics.
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P		With assistance, may perform diagnostic procedures for network systems, both virtual and hardware, reported having problems.
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P		Perform diagnostic procedures for network systems, both virtual and hardware, reported having problems.
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P		Conduct detailed review of construction documents and blue prints at 80% for internal and external cable plan facilities, reviews planned conduit runs, information outlet locations, locations, size and environmental in Enterprise Rooms, Telecommunications Closets and Hub Rooms.
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P		Redefines University wiring standards as changes to the industry occur. (High end engineering role)
<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P		Performs field surveys of routine service orders, estimates install or repair hours required, provides estimates to the installation supervisor for scheduling.	
<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P			
<b>□2. ( %)</b>		<b>Network Design and Installation</b>	
<b>□E □NE</b>	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P		Uses knowledge of routing, switching, network addressing and data transport methods to assist in hardware installation and network configuration.
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P		Understands basic fiber and copper cabling practices well enough to properly connect network hardware.
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P		With assistance, may design and install network systems including network wiring, servers and network interface cards as required.

	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P	Design and install network systems including network wiring, servers and network interface cards as required.
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P	Can configure routers, switches and repeaters for basic operations.
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P	Understand the different types of fiber and copper cables and how their differences affect their suitability for use in different network environment. <b>(More advanced)</b>
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P	With assistance, may participate in configuring and installation of network hardware including Network Interface Cards (NIC), network hubs, and related connections on both connected PCs and network servers.
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P	Configures and installation of network hardware including Network Interface Cards (NIC), network hubs, and related connections on both connected PCs and network servers.
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P	Creates complete network architectures that provide end-to-end application solutions; provides advanced network designs; recommends how network systems should evolve to maintain compatibility with industry standards; forecast network changes. <b>(More advanced)</b>
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P	Participates in the high-level design of infrastructure with experts from other UIS groups.
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P	Attends project meetings with the client, internal and external departments or firms, and User Services Staff to ensure that all client request and requirement are included in the project plans, as well ans any associated cost.
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P	
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P	
<b>3. (%)</b>	<b>WAN Support</b>	
<input type="checkbox"/> E <input type="checkbox"/> NE	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P	Maintains existing WAN circuit documentation; adheres to GU standards when helping to order and provision WAN circuits.
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P	Can configure hardware components with some assistance.
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P	Understand complex hardware components and cable pin-outs; provides wireless and other advanced remote access services.
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P	
<b>4. (%)</b>	<b>Network Maintenance</b>	
<input type="checkbox"/> E <input type="checkbox"/> NE	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P	Assists in collecting and analyzing faults, traps, performance and diagnostic data; maintains inventory and documentation that support timely problem resolution.
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P	Performs basic fault-detection and fault-notification procedures; troubleshoots basic problems using diagnostic tools, web resources and documentation.
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P	Interprets complex problems using advanced techniques and tools; designs performance monitoring and management systems. <b>(More advanced)</b>
	<input type="checkbox"/> D <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> P	

<b>□5. (%) Protocols</b>		
□E □NE	□D □W □M □P	Helps client support teams differentiate between IP-based and IPX based problems.
	□D □W □M □P	Configures <b>basic</b> routing protocols (RIP); solves problems where excessive hop counts, TTL and other common indicators are present.
	□D □W □M □P	Configures <b>advanced</b> router protocols that increase redundancy and network reliability. ( <b>More advanced</b> )
	□D □W □M □P	
<b>□6. (%) Security</b>		
□E □NE	□D □W □M □P	Follows all security procedures and guidelines.
	□D □W □M □P	Programs <b>basic</b> access lists and filters on routers and switches.
	□D □W □M □P	Implements firewalls, and complex network security tools.
	□D □W □M □P	

### E. Dimensions:

Number of Persons Supervised:	Direct:	Indirect:
Number of Students Supervised:	Direct:	Indirect:

### Leadership: Check the most descriptive statement for the job as a whole.

□1)	“Work/Project Leader”: answers general questions and provides assistance; maintains assignment completion schedules; performs the same tasks as others.
□2)	“Team Leader”: advises and directs the teams; answers complex questions functioning as an expert resource; maintains assignment completion schedules. Performs the same and higher level tasks.
□3)	Supervisor: <u>participates</u> in the selection process of new employees; assists with performance appraisals; disciplinary problems are referred to a higher level. Performs similar and higher level tasks.
□4)	Supervisor: <u>solely responsible</u> for hire/fire decisions; performance appraisals; employee training and development; handles disciplinary problems. <b>This person will be evaluated on these decisions.</b>
□5)	Supervisor: responsible for multiple units or areas, each with supervisors who have hire/fire authority.
□6)	Not applicable to this position.

### Complexity of Work: Check the most descriptive statement

□1)	Routine: Primarily deals in one singularly directed functional area. Awareness of related areas is not significant.
□2)	Semi-complex: Requires some integration of different but relatively similar bodies of knowledge and/or functions. Some analytical ability becomes prevalent.
□3)	Complex: Functions differ significantly from each other or a major function is broad and requires integration of differing complicated bodies of knowledge. Analytical ability is clearly required.
□4)	Very Complex: Involves complicated bodies of knowledge/functions that differ substantially from each other.

### Freedom of Action: Check the most descriptive statement

□1)	General Supervision: Proceeds on regular tasks, referring questionable situations to supervisor.
□2)	Very General Supervision: Resolves most questions, accomplishes most tasks without guidance.
□3)	Little Guidance: Performs complex functions, establishes priorities, resolves issues, rarely refers to supervisor.
□4)	Plans, develops, and implements functions/projects for functional unit(s) or team(s).
□5)	Other (explain):

**Impact:** *Check the most descriptive statement*

- 1) Decisions could positively or negatively affect the immediate work, individual user or group of users.
- 2) Decisions could positively or negatively affect a large group of users, entire department, or networked systems.
- 3) Decisions could positively or negatively affect multiple departments.
- 4) Other (explain):

**Interactions:** *Check the most descriptive statement and describe contacts*

- 1) Exchange basic information and normally requires ordinary courtesy and effectiveness in informing others.
  - 2) Exchange and interpret information requiring understanding to influence others.
  - 3) Exchange, analyze, and interpret information requiring various approaches to influence others.
- Describe the people with whom this position has regular contact. Identify level and title of GU positions or describe persons outside GU:

**Fiscal Responsibility:**

Budget responsibilities (creation or disposition) or salary dollars:

Capital inventory affected:

**Physical Working Conditions:** *Describe physical environment, lifting, walking, fumes, odors, etc.*

**F. Minimum Qualifications:**

Academic Level:       High School       College       Bachelor's       Master's       Doctorate  
Degree Program (list):

Practical Experience in Years: *Check appropriate box and fill in type of experience required.*

- 1) Entry level: 1-3 years work experience in...
- 2) Intermediate level: 3-5 years work experience in...
- 3) Advanced level: 5+ years work experience in...

Technical Qualifications or Specialized Certification:

Other Skills:

**G. Additional Information About this Position:**

*Supplementary information as applicable. List responsibilities that have changed since the last position description was done, or reasoning behind creating a new position. List all special skills required, characterized as mandatory or desired.*

**H. Signatures:**

Incumbent:

Supervisor:

Dept. Head or Authorizing: