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Cybersecurity Internship
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Reflection Paper 6

This week, I had an exciting opportunity to step into roles that aligned closely with IT Infrastructure Specialist and Network Administrator responsibilities. We're currently designing a new computer lab on campus, and my involvement in this project has allowed me to experience the complexities of infrastructure planning from the ground up. Collaborating directly with faculty members who are responsible for the overall planning of the space, I'm gaining practical skills in how to create a well-organized, functional, and adaptable setup that meets both the immediate and long-term needs of our university's student users.

One of the main challenges we faced was finding a balance between maximizing the number of workstations and ensuring the lab doesn't become overcrowded or uncomfortable. This meant I had to work closely with the faculty to analyze the room's layout and determine the most efficient placement of computers, desks, and networking hardware. For example, careful consideration went into the spacing of each workstation to maintain comfort while allowing easy access to shared resources and ensuring all stations were within range of power sources and network access points.

In addition to workstation layout, I was able to supervise the planning of the network and power infrastructure in a way that would support both current needs and potential future expansions. We discussed various cabling options and network configurations to optimize both speed and security, paying close attention to ensuring that every machine could be connected reliably without overloading the network. This required a detailed review of cabling routes, where to position network switches, and how to ensure the lab's infrastructure could handle future technological updates without frequent reconfigurations.

This project has given me valuable insights into the broader role that IT infrastructure plays in creating a productive environment, especially in educational settings. It's one thing to manage individual devices or troubleshoot on a smaller scale, but designing an entire lab requires careful consideration of how all the elements—computers, network connections, power distribution, and physical layout—work together to create a cohesive system.

I've learned that strong communication and planning skills are as essential as technical knowledge in this kind of project. Working alongside the faculty has reinforced the importance of aligning IT infrastructure with user expectations, understanding the needs of the lab's future users, and ensuring a balance between functionality and user-friendliness. This hands-on experience has given me a clearer vision of the impact of infrastructure design, reinforcing my commitment to a field where technological planning is as essential as the technology itself.