

## **Final Internship Paper**

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### **1. Introduction**

My decision to pursue an internship at the ODU IT Help Desk was driven by a strong desire to gain practical, hands-on experience in the field of cybersecurity, specifically within a university setting. While my coursework at Old Dominion University (ODU) had provided me with a solid theoretical foundation, I recognized the importance of applying that knowledge in a real-world environment. I was particularly drawn to the ODU IT Help Desk because it offered the opportunity to support a large and diverse user base and contribute to the smooth operation of the university's technology infrastructure.

I hoped to achieve several specific learning outcomes and objectives through this internship. First, I wanted to enhance my technical skills in areas such as user support, troubleshooting, and security awareness. Second, I aimed to develop my professional

communication and collaboration abilities, as I understood that these skills are crucial for success in any workplace. Finally, I sought to gain a deeper understanding of the day-to-day operations of a university IT help desk and how it contributes to the overall success of the institution's mission.

## **2. Company and Internship Overview**

The ODU IT Help Desk is the central point of contact for technology support at Old Dominion University. It provides a wide range of services to students, faculty, and staff, including troubleshooting technical issues, assisting with software and hardware problems, managing user accounts, and promoting security awareness. As part of Old Dominion University, the IT Help Desk plays a critical role in ensuring that the university's technology infrastructure operates efficiently and effectively to support academic, research, and administrative functions. Old Dominion University is a public research university located in Norfolk, Virginia, with a diverse student body and a strong commitment to innovation and community engagement.

My initial orientation and training at the ODU IT Help Desk provided me with a comprehensive overview of the department's operations, service protocols, and the university's technology resources. I was impressed by the team's dedication to providing excellent customer service and their commitment to continuous learning and professional development. My first impressions of the ODU IT Help Desk were overwhelmingly positive, and I was excited to begin working with the team and contributing to their mission.

## **3. Management Environment**

The management environment at the ODU IT Help Desk was characterized by a hierarchical, yet supportive structure. My supervisor, Stefan Hancock, provided clear expectations, constructive feedback, and ample opportunities for me to learn and grow. The general management structure was well-organized, with clear lines of authority and communication. I found the management to be effective in fostering a collaborative and productive work environment. Regular team meetings, open-door policies, and a focus on employee empowerment contributed to a positive and engaging experience.

## **4. Work Duties, Assignments, and Projects**

During my internship, I was involved in a variety of work duties, assignments, and projects. These tasks provided me with valuable hands-on experience and allowed me

to apply the knowledge and skills I had gained in the classroom.

- **Password Resets and Account Management:** A significant portion of my time was spent assisting users with password resets and account management tasks. This involved verifying user identities, guiding them through the reset process, and educating them on password security best practices. This task was crucial to the university as it ensured that only authorized personnel had access to sensitive systems and data, thereby mitigating the risk of security breaches. (See Appendix A: Reflection 1)
- **Troubleshooting:** I was responsible for diagnosing and resolving a wide range of technical issues reported by users. This included problems with software, hardware, network connectivity, and access to university systems. Effective troubleshooting was essential to minimize downtime and ensure that students, faculty, and staff could perform their duties efficiently.
- **User Support and Redirecting:** A key aspect of my role was providing first-line support to users, which involved answering their questions, addressing their concerns, and guiding them through basic technical procedures. When necessary, I redirected users to other specialized departments or personnel within ODU IT for more advanced assistance. This ensured that all user issues were addressed in a timely and effective manner.
- **Phishing Awareness and Response:** I assisted in identifying and responding to potential phishing attempts targeting the ODU community. This involved analyzing suspicious emails, educating users on how to recognize phishing scams, and reporting incidents to the appropriate teams within ODU IT. This work was crucial in protecting the university from malware infections, data breaches, and other security threats. (See Appendix B: Reflection 2)

## 5. Use of Cybersecurity Skills

My internship at the ODU IT Help Desk provided me with ample opportunities to utilize and expand my cybersecurity skills, particularly in the context of a university help desk environment. Prior to the internship, I had a foundational understanding of networking concepts, operating systems, and security principles from my coursework at ODU.

During the internship, I honed my skills in areas such as user authentication and access control, phishing detection, and security awareness training. I learned how to apply these skills to real-world scenarios, such as verifying user identities for password resets, educating users about phishing risks, and troubleshooting security-related issues. My on-the-job experience enhanced my understanding of the importance of user education and support in maintaining a strong security posture

within a university setting.

## 6. ODU Curriculum and Internship Connection

The ODU cybersecurity curriculum prepared me well for certain aspects of the internship, while other areas required me to learn new skills on the job. Courses such as [List relevant ODU courses, e.g., CYSE 310, CYSE 420] provided me with a strong theoretical foundation in networking, operating systems, and security principles. I was able to connect the concepts I learned in these courses to the practical tasks I performed during the internship, such as understanding network protocols and troubleshooting connectivity issues.

However, the internship also exposed me to new concepts, techniques, and skills that I had not yet encountered in my coursework. For example, I had to learn how to use specific ticketing systems and help desk software used at ODU, and how to follow university-specific procedures for handling user requests and security incidents. While the ODU curriculum provided a solid base, the internship allowed me to bridge the gap between theory and practice and develop valuable hands-on skills in a university help desk setting.

## 7. Internship Objectives Assessment

Looking back on the objectives I set for myself at the beginning of the internship, I can say that the experience largely fulfilled my goals:

- **Enhance technical skills:** I enhanced my technical skills in areas such as user support, and troubleshooting. I gained practical experience in diagnosing and resolving technical issues, and in providing effective user assistance within a university IT environment.
- **Develop communication and collaboration abilities:** I developed my professional communication and collaboration abilities through daily interactions with colleagues, and direct communication with students, faculty, and staff. I learned how to communicate technical information clearly and concisely to both technical and non-technical audiences, and how to handle challenging user interactions in an academic setting.
- **Gain understanding of help desk operations:** I gained a deeper understanding of the day-to-day operations of a university IT help desk and how it contributes to the overall success of the institution's cybersecurity posture. I witnessed firsthand how help desk staff play a crucial role in supporting the university community, enforcing security policies, and responding to security incidents.

## 8. Motivating Aspects

The most motivating aspects of the internship were the opportunities to help students, faculty, and staff solve their technical problems, contribute to the university's security efforts, and learn from experienced professionals in a real-world setting. I was particularly motivated by the fast-paced nature of the work and the constant need to adapt to new challenges in a university environment. The collaborative and supportive work environment also contributed to my motivation and made me feel like a valued member of the team.

## 9. Discouraging Aspects

The most discouraging aspect of the internship was dealing with frustrated users who were experiencing technical difficulties. However, this experience also taught me valuable lessons in patience, empathy, and conflict resolution, and reinforced my commitment to providing excellent customer service even in challenging situations within a university setting.

## 10. Challenging Aspects

The most challenging aspects of the internship were the need to quickly diagnose and resolve unfamiliar technical issues, and the pressure to handle a high volume of user requests while maintaining a professional and courteous demeanor. However, I was able to overcome these challenges through a combination of self-study, mentorship from senior colleagues, and hands-on practice.

## 11. Recommendations for Future Interns

Based on my experience, I would offer the following recommendations for future interns at the ODU IT Help Desk:

- **Have a strong foundation in networking and operating systems:** A solid understanding of these fundamentals is essential for success in any IT support role, especially in a complex university network environment.
- **Develop excellent communication and interpersonal skills:** The ability to communicate clearly and effectively with a diverse user base, including students, faculty, and staff, is crucial.
- **Be patient, empathetic, and customer-service oriented:** A help desk environment requires a strong focus on helping others and resolving their issues with patience and understanding, particularly in an academic setting where users may have varying levels of technical expertise.

- **Be proactive and take initiative:** Look for opportunities to expand your knowledge, improve processes, and contribute to the team's success.
- **Be eager to learn and adapt:** The IT field is constantly evolving, so it's important to be a lifelong learner and embrace new technologies and challenges.

## 12. The Student Experience at ODU IT Help Desk

Working at the ODU IT Help Desk as a student myself provided a unique perspective and set of experiences. One of the most rewarding aspects was the opportunity to directly assist my fellow students. I gained valuable insight into the kinds of technology challenges students face, from basic connectivity issues to more complex software problems. This experience reinforced the importance of clear communication and patience, as I often had to explain technical concepts to individuals with varying levels of technical expertise.

Moreover, working in this environment allowed me to collaborate with other student employees, fostering a sense of camaraderie and shared purpose. We learned from each other, supported one another, and developed strong teamwork skills. This collaborative aspect not only made the work more enjoyable but also enhanced our problem-solving abilities.

Balancing my responsibilities at the IT Help Desk with my academic workload was a significant learning experience. I developed essential time-management and organizational skills, which are crucial for success both in college and in future careers. This experience also provided me with a deeper appreciation for the role of IT support in the overall university environment and its impact on student success.

## 13. Conclusion

My internship at the ODU IT Help Desk was an invaluable experience that significantly enhanced my technical skills, professional abilities, and understanding of the cybersecurity field, particularly within a university help desk context. The hands-on experience I gained, the challenges I overcame, and the lessons I learned will undoubtedly shape my future academic and professional pursuits. I am especially grateful to Professor Duvall for connecting me with Stefan Hancock at ODU IT Help Desk and facilitating this opportunity. This internship has solidified my interest in pursuing a career in cybersecurity and has provided me with a clearer understanding of the important role that help desk professionals play in protecting an organization's information assets and supporting its users, especially within a university setting. I am confident that the skills and experience I gained at the ODU IT Help Desk will make me a more competitive candidate for future job opportunities and enable me to make a

meaningful contribution to the cybersecurity profession.