

Final Individual Reflection

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Professor Teresa Duvall

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Introduction

Fall 2025 is the start of my Senior year at ODU which to me is the most important year for any college student but more so to a Cybersecurity major because the Senior year encompasses internships, professional networking, and homing in the trajectory you want to go in the broad scope of Cybersecurity. The Cyber Clinic Internship was among the most challenging and rewarding academic experiences of my time at Old Dominion University. Like traditional coursework, this internship required professionalism, teamwork, public speaking, accountability and flexibility with a real municipal client. Our group executive reflection captured the experience and project outcomes, but this is my reflection on my growth, challenges & lessons learned throughout the semester. Reflecting on the opportunity, it really reshaped how viewed leadership, communication and cybersecurity in the public sector.

Course Experience and Background

The clinic felt different from anything I had taken before beginning the semester. The last class which I had to work in a small group and present in front of a class was Professor Yelpi's CYSE 201S Social Science in Cybersecurity class, which was nowhere near workload or experience as I experienced in the Cyber Clinic. The Initial weeks were spent on orientation, expectations, learning the clinic's mission in helping small businesses with enhancing their cybersecurity practices while allowing students to gain valuable industry experience.

Professor Duvall, the clinic leadership and guest speakers set the tone for this course, it was supposed to simulate a professional environment not a classroom. Design thinking sessions and improv exercises with Dr. Baaki really stuck out early on because they made me think beyond technical solutions and about how communication, empathy, and

collaboration can help cybersecurity consulting. Such exercises appeared at the time to be rather exciting because I had a theater background in High School, so I was aware of similar improv exercises and how effective it is to deepen a group's dynamic and relationship to one another. My biggest takeaway from Dr. Baaki is the importance of understanding and practicing core design principles such as using "yes and" statements rather than using "no but" statements.

Experience Working with Suffolk and the Public Sector

When our team started working with the City of Suffolk, the internship shifted gears to have my full attention, because I knew we had to make a good impression. My time in the Navy and prior professional experience led me to volunteer as team leader. But stepping into leadership within an academic environment presented new challenges. Unlike a traditional workplace with established authority structures, leading a student team meant balancing accountability with collaboration. Technically the internship was just as impactful. Running Tenable vulnerability scans on real municipal systems was an extremely valuable experience in my cybersecurity education. As actual vulnerabilities assessed their potential impact and prioritized remediation, cybersecurity felt more real than any lab exercise. At Suffolk's vulnerability management meetings and facility tours we saw how cybersecurity works in the public sector. I learned cybersecurity in a municipal setting means constantly balancing security with functionality, budget constraints and public safety. I learned that protecting systems that affect citizens and critical services is complex.

Memorandum of Agreement Objectives

Overall, I felt that the objectives outlined by Memorandum of Agreement were fulfilled throughout the internship.

- Practical application of classroom knowledge

- Collaboration and communication in a team environment
- Exposure to threat intelligence
- Understanding of industry best practices
- Research and innovative cybersecurity solutions

Seeing first-hand how my prior coursework translated into real practical work made me value the education that I've received so far. This was my goal going into this internship apart from the professional networking and resume boost.

One objective that I felt wasn't fully achieved was when it came to research and innovative cybersecurity solutions, which was mostly due to being assigned to Suffolk. Most of the groups had small businesses to work with and learned how to improve their security posture. Since Suffolk is an established city government, their security posture was already refined so we were just spectators of what an ideal company with an established security posture looks like. However, it still allowed me to gain valuable insight into the challenges a city government faces since they are held to such a high standard, it can be stressful keeping up with so many networks, that can be potentially vulnerable to attacks at any time and being at that position requires constant vigilance.

What Went Right and What Went Wrong

Some of the biggest takeaways I experienced with improvements personally were in public speaking and presentation confidence. Even after having more than 8 years of professional customer service experience knowing how to present myself professionally, the pressure of presenting technical cybersecurity findings to faculty, experienced professionals in the industry were new, nerve racking but honestly quite thrilling. During parts of my group's early presentations showed that I tend to use notes and structured scripts as a way for me to not miss something or get off track. During dry runs I wrote out my speaking points on index cards and practiced repeatedly ensuring they were correct. I came to realize that not

only is preparation important, but trusting your material helps too. I realized this most recently during our final executive reflection presentation, I felt more confident, engaged and I spoke naturally without relying on index cards. Even though my group was last to present, we absolutely delivered. Members of the faculty even complimented our presentation to be polished and refined which only confirmed that we rehearsed our presentation numerous times as we kept it below the time limit and stuck to our topics.

What I Would Do Differently

Reflecting on the whole internship, I must give myself credit because I have recognized that I've grown professionally and personally. I was challenged to lead and communicate effectively and use my technical knowledge in real world situations. It allowed me to highlight areas that I could improve on such as stress management and trusting myself under pressure which I thought had seemed to have gotten rusty over the years. If I were to do things differently, I would just prioritize in being prepared earlier. For myself and my team it felt like we had a habit of working on our assignments closer to the deadline which can be chaotic. When it came to creating slides and designing them in modern way without a lot of text or information is something I can improve since I found myself designing most of my group's slides for our presentation. Other than that, I think public speaking is something I can just develop more by doing it and being confident speaking in front to an audience and at the same time sticking to my points without going into tangents.

Most Motivating and Most Challenging Aspects

One of the immense challenges that I encountered during my internship was balancing leadership responsibilities, commitments to portions of the report and presentation. I am grateful enough to be teamed up with such hard-working teammates who are solely full-time students with fewer commitments. They were amazed at how I was able to do what I do while balancing my personal responsibilities, and both stepped up equally to share the

workload and that is the group's communication and dynamic really kicked off. I decided to pursue my degree at the beginning of 2023, and it has been nonstop ever since so someone like me who is older than many of my peers, works, and has a family, my schedule was very different than full-time students. Sometimes I felt pressured to meet clinic expectations while juggling other coursework and personal obligations. It sometimes meant staying up late to refining PowerPoint slides, review reports or practice presentation material. It was exhausting at times, but it reinforced discipline, time management and accountability skills necessary in any cybersecurity career.

While working with Suffolk, it allowed me to have a deeper understanding of cybersecurity failures that can have huge implications for public safety and utilities. If I get the opportunity to, I can see myself working in city government. During our initial City Hall tour, I noticed how many Suffolk's IT department employees were military veterans as well which reflected how they treated each other like family, which is one of the aspects of the military I always valued. One of my favorite moments is seeing first-hand how Suffolk's IT Team communicated with one another in just one of their cybersecurity vulnerability meetings. Outside of technical expertise their team's dynamics were a testament to the importance of being adaptable working under pressure, having strong communication skills and holding each other accountable was absolutely motivating to see as a student.

Recommendations for Future Cyber Clinic Interns

Our initial dry run presentation was rough because we did not address clearly who our audience was, so in future reference knowing your audience is absolute paramount when it comes to public presenting. We were told throughout the semester not to bore clients with technical data and to make concrete recommendations and since Suffolk consist of established professionals we know we shifted our mindset to deliver the presentation in a way for them to not only appreciate the effort we did but to also impress them with our report and findings, especially using Valor's Top 10 checklist. We took heart and kept track

of the feedback we received during our presentations, especially when it came to our slides since no one in my team was adept in designing power points. By being an observant person as I am, I observed how other teams presented and how they constructive their slides and kept notes on their group's dynamics and slide design, I constructive a majority of my teams slides so I knew I had to go back to the drawing board several times to get our slides to be just right.

Recommendations for Course Improvement

Since my team were assigned to Suffolk, I felt like we missed out on what other groups experienced when it came to following the assignment directed by Valor CEO Greg Tomchick. After his initial presentation I was even confident with myself that I could do both Suffolk's side and participate in what the rest of the class are doing with their workings with small businesses, but of course that didn't work out after realizing how much my group had to do with Suffolk. I'm the rest of the class who weren't assigned to Suffolk felt the same way with what we experienced working with a Municipal. I'm aware that Mrs. Duval mentioned that she is working on making a separate class that solely focuses on working with municipalities and I'm looking forward to what the future holds with that group of students because it was a positive experience. A recommendation for course improvement would just be for students to have more group work earlier in the class, to be more familiar with working with groups, presenting and being peer reviewed by other students. I learned the most with the feedback my group received during our dry runs.

Conclusion

Overall, the Cyber Clinic Internship was among the best experiences in my academic career to date. Cybersecurity is such a dynamic and vast industry and can be daunting for anyone wanting to pursue it as a career let alone a degree. While ODU's Cybersecurity coursework consists of a lot of technical knowledge and labs in a broad range of topics which you may or not even ever touch again there are few opportunities that compare to

what this internship offers and, in my opinion, far more valuable. Success in this field extends far beyond technical expertise, refining one's soft skills and social dynamics is just as important, especially since you will be working in team-based and client-facing environments. I can confidently say that I've gained a clearer understanding of professional standards, confidence in public speaking, working in a team, and most importantly the experience of applying skills that I've learned in school to an actual professional setting.