Whatcom Community College's Computer Information Services Program is looking for companies interested in working with students on Capstone Projects that are incorporated into its Bachelor of Applied Science (BAS) in IT Networking - Cybersecurity program.

The BAS Capstone Projects involve a requirement for students to work with an external organization (company, non-profit, agency or educational institution) to accomplish an IT project related to their coursework in the program. The students check in weekly through the quarter with their WCC instructor to report on progress, and at the end of the quarter they submit a summary paper and give a presentation (Capstone-participating organization representatives are welcome and encouraged to attend the presentation).

Organizations can expect capstone students to be on site at their organization for guidance and/or guided or independent project work between 15 and 50 hours total.*

Course work in the BAS program includes:

- Database Management
- Cloud Computing
- Mobile/Wireless Technologies
- Web Development
- Supply Chain
- Industrial Control Systems Architecture
- Network Administration/Design
- Network Security
- Programming/Scripting Languages

Previous projects have included (as examples):

- **Google Community Connector** - Begin creation of a custom API connection that will allow customers to access restful API endpoints through a google cloud dashboard on a public facing developer portal. To configure and test the necessary back end for a working example to provide the customers that demonstrates the potential of connecting to the API.
- **Computer replacement project** - and upgrade to Windows 10 and upgrade to Office 365, Replacing all end user computers at work (approx. 125 computers) and upgrading users (approx. 90 users) to windows 10 and O365.
- **DFS Namespace & Replication Servers** - Phase One will be consolidating approximately four or five file servers into two separate servers—one server per domain. The two servers will be Namespace servers that will hold file shares.   Phase Two will be taking the two namespace servers and making them redundant by creating a DFS-R environment. Then there will be load-balancing/round-robin relationship between the two pairs.
- **Virtualizing a Datacenter Stack** - A complete physical datacenter migration into a cloud datacenter for better high availability and disaster planning.
- **Implementation of a Development Pipeline** - redesigning our development pipeline and lifecycle for my work. This includes, creating new environments, retiring old environments, writing policies, producers, scripts, health checks and project management.

- **PCI-DSS compliance** - attempt to complete (or become compliant with) two of twelve specific requirements of the "Payment Card Industry Data Security Standard" (PCI-DSS). The two "requirements" are Requirement 1: Install and maintain a firewall configuration to protect cardholder data and Requirement, and 10: Track and monitor all access to network resource and cardholder data. Upon completion of work (the two requirements) I would document both the high-points and pitfalls of getting the requirements completed as "lessons learned".
- **Financial Databases** - Create and configure a database to track budgets and expenditures.
- **International Supply Chain Initiatives** - a few small projects under the "International Expansion" banner for my customers. They are as follows: Brexit Changes for international shipping, EU Unicode changes.
- **Importance of Proper Documentation** - Updating and preparing internal IT documentation for audit, while expanding and modernizing our knowledge base.

Most students will leverage their current employment for their Capstone Projects, but there are some students who do not work for IT-oriented companies. For Spring Quarter, 2020 (starts April 15, 2020), there are two students in need of projects at companies willing to host the project.

Please contact Dr. Carl Willis-Ford at cwillisford@whatcom.edu if interested in supporting our students' Capstone Projects or if you have any questions. With the start of the quarter looming, please contact NLT 10 April, 2020.

*Given the current environment of COVID-19, Spring 2020 Capstone Projects will be planned with telecommuting in mind. Students will be guided to expect and support remote meetings and communication (using collaborative tools such as zoom and email) to meet with their organizational representative(s) on Capstone Projects.

About WCC's BAS in IT Networking - Cybersecurity

Whatcom Community College's bachelor of applied science (BAS) degree in IT networking - cybersecurity includes courses infused with security topics and embedded certificates of proficiency in cloud computing, industrial control systems (SCADA), mobile technologies, and web development. The curriculum aligns with specific focus areas defined by the National Security Agency / Department of Homeland Security as part of their Center of Academic Excellence (CAE) program. Additionally, curriculum builds off of the National Initiative for Cybersecurity Education's (NICE) Cybersecurity Workforce Framework and the Department of Labor's (DOL) Cybersecurity Competency Model; as such, the program helps meet the national shortage of cybersecurity professionals.