CYBER SECURITY CAPSTONE
Course Syllabus

Course Number: CSFS-0012
OCAS Code: None
Course Length: 120 Hours
Career Cluster: Information Technology
Career Pathway: Network Systems
Career Major(s): Cyber Security Forensics Specialist

Pre-requisite(s): Network Security

Course Description: Internships, project-based instruction and teamwork will be utilized to reinforce cyber security skills. Students will make final preparations for industry certifications as they master outlined competencies. Students will select from various project options to finalize portfolios that highlight skills and certifications. Students may also undertake special projects, cross-train or participate in workplace learning opportunities to enhance skills in accordance with industry demands.

Textbooks:

Course Objectives: A. Demonstrate Comprehensive Knowledge of Cyber Security by Completing Capstone Project
1. Demonstrate mastery in the field of Cyber Security through the pursuit of advanced certifications.
2. Complete advanced cyber security-related projects with limited supervision.
3. Gather data to analyze customer requirements.
4. Identify and analyze customer/organizational needs and requirements.
5. Produce IT-based strategies and project plan to solve a specific problem.
6. Conduct needs analysis.
7. Demonstrate the effective use of tools for cyber security project.
8. Complete a comprehensive case study pertaining to cyber security.
9. Perform project management.
10. Produce strategies and plan to solve a specific network problem.
11. Manage information system project methodologies.
12. Perform quality assurance tasks to produce quality products.
13. Perform maintenance and customer support functions.
14. Define scope of cyber security in written form to achieve individual and group goals.
15. Demonstrate effective use of tools for implementing a cyber security design and project management.
16. Participate in project development with clients and team members.
17. Test cyber security solution.
18. Perform maintenance and customer support functions for cyber security projects.
19. Demonstrate ability to communicate and resolve conflicts with a diverse workforce.
20. Understand the importance of cross-functional teams in achieving IT project goals.
21. Demonstrate knowledge of leadership skills needed in the IT environment.
22. Build interpersonal skills with individuals and other team members.
23. Demonstrate appropriate knowledge and behaviors of legal responsibilities and of positive cyber-citizenship.
24. Identify and demonstrate positive work behaviors and personal qualities.
25. Identify and target career opportunities in one or more career pathways.
26. Finalize personal career plan to meet career goals and objectives.
27. Market skills and abilities and apply job readiness skills in conjunction with a portfolio.
28. Successfully participate in a teamwork environment.
29. Identify and apply customer service techniques necessary for a successful business.
30. Develop prototype, flowchart, requirements document, and sample budget for implementation of a cyber security project.
31. Demonstrate the effective use of tools for cyber security design and implementation, and project management.
32. Develop a proposal and contract for customer approval actual experiences.
33. Demonstrate knowledge of the relationship between lifelong learning and IT career development.
34. Demonstrate knowledge of career development/progression patterns in the IT industry.

ODCTE Objectives

Teaching Methods: The class will primarily be taught by the lecture and demonstration method and supported by various media materials to address various learning styles. There will be question and answer sessions over material covered in lecture and media presentations. Supervised lab time is provided for students to complete required projects.

Grading Procedures: 1. Students are graded on theory and shop practice and performance.
2. Each course must be passed with seventy (70%) percent or better.
3. Grading scale: A=90-100%, B=80-89%, C=70-79%, D=60-69%, F=50-59%.

Description of Classroom, Laboratories, and Equipment: Tulsa Technology Center campuses are owned and operated by Tulsa Technology Center School District No. 18. All programs provide students the opportunity to work with professionally certified instructors in modern, well-equipped facilities.

Available Certifications/College Credit The student may be eligible to take state, national or industry exam after completion of the program. College credit may be issued from Oklahoma State University-Okmulgee, Rogers State University or Tulsa Community College. See program counselor for additional information.
College Credit Eligibility:
The student must maintain a grade point average of 2.0 or better.