Bossier Parish Community College
Master Syllabus

Course Prefix and Number: CTEC 200   **Credit Hours:** 3-3-0

Course Title: Network Defense

Course Corequsite: CTEC 287 or program director approval

Textbook(s): CompTIA CertMaster Learn for PenTest+ (PT0-002) ISBN: 978-1-64274-387-6

Course Description: This course will provide students the knowledge and skill to protect a network. The course is aligned with CompTIA's Pentest + certification. The objectives of the certification are to plan and scope an assessment, understand legal and compliance requirements, perform vulnerability scanning and penetration testing using appropriate tools and techniques, and analyze the results. In addition, the student will be able to produce a written report containing proposed remediation techniques, effectively communicate results to management, and provide practical recommendations. This course is required toward the CNSS 4011-4016 certifications.

Learning Outcomes:
At the end of this course, the student will:
   A. plan and scope a penetration test assessment;
   B. understand legal and compliance requirements;
   C. perform vulnerability scanning and penetration testing using appropriate tools and techniques and analyze the results;
   D. produce a written report containing proposed remediation techniques;
   E. effectively communicate results to management; and
   F. provide practical recommendations.

To achieve the learning outcomes, the student will or will be able to:
(The letter designations at the end of each statement refer to the learning outcome(s).)
   1. identify assessment types and goals, describe the overall penetration testing process, plan and scope engagements, and analyze scripts in several common formats (A) (B);
   2. choose appropriate reconnaissance techniques to support a security engagement, and perform OSINT gathering (A) (B);
   3. perform network scanning and enumeration, plan and perform vulnerability scans, and test applications and other software (C);
   4. analyze discovered vulnerabilities and choose appropriate exploits to use against them (C);
   5. attack organizational vulnerabilities through social engineering and physical intrusion;
   6. exploit vulnerabilities in wired and wireless networks (C);
   7. recognize and exploit common vulnerabilities in web and local applications (C);
   8. identify host vulnerabilities, and exploit them to gain access, elevate privileges, and perform post-exploitation tasks (C);

9. follow up on a security engagement by preparing a formal report and recommending mitigation strategies (D)(E)(F);
10. identify a strategy for a pentest using the Flaw Hypothesis method (A); and
11. discuss different pentesting methodologies such as OSSTMM, PTES, NIST, and the Penetration Testing Framework (B).

Course Requirements:
- To pass the course, student must achieve a course average of 70% or above.
- Students must have access to a computer (not mobile device), Microsoft Office, and the Internet to complete the assignments. Computer, software, and the Internet are available to students on campus during scheduled computer lab times and in the Learning Commons located in the BPCC Library.
- Students are required to use BPCC's LMS and are encouraged to use the BPCC Library to research topics and employment opportunities.

NICE Framework Categories:

Securely Provision (SP)	Operate and Maintain (OM)	Oversee and Govern (OV)
Protect and Defend (PR)	Analyze (AN)	Collect and Operate (CO)
Investigate (IN)		

Specializations:
- Network Security Administration
- Network Security Engineering

CAE Knowledge Unit Mapping:
- Penetration Testing (PTT)

Course Grading Scale:

- A = 90 - 100
- B = 80 - 89
- C = 70 - 79
- D = 60 - 69
- F = 0 – 59

Attendance Policy:
Each student is expected to attend class regularly; excessive unexcused absences constitute grounds for suspension. Refer to the student handbook for Attendance Policy.

Course Fees: This course is accompanied with an additional non-refundable fee for supplemental materials, laboratory supplies, software licenses, certification exams and/or clinical fees.

Nondiscrimination Statement: Bossier Parish Community College does not discriminate on the basis of race, color, national origin, gender, age, religion, qualified disability, marital status, veteran's status, or sexual orientation in admission to its programs, services, or activities, in

access to them, in treatment of individuals, or in any aspect of its operations. Bossier Parish Community College does not discriminate in its hiring or employment practices.

Coordinator for SECTION 504 AND ADA
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Equity/Compliance Coordinator
Teri Bashara, Director of Human Resources
Human Resources Office, A-105
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Phone: 318-678-6056
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