

Bossier Parish Community College  
Master Syllabus

**Course Prefix and Number:** CTEC 280

**Credit Hours:** 3-3-0

**Course Title:** Computer Forensics

**Course Prerequisites:** CTEC 279

**Textbook(s):** Nelson/Phillips/Steuart. MindTap Security Lab, 1 term (6 months) Instant Access for Nelson/Phillips/Steuart's Guide to Computer Forensics and Investigations via Live Virtual Machines, 6<sup>th</sup> edition. Cengage. ISBN: 9781337568944.

**Software:** This course will use MindTap.

**Course Description:** This course provides an overview of computer forensics and investigation tools and techniques. Operating system architectures and disk structures will be discussed, as well as what computer forensic hardware and software tools are available. Other topics include the importance of digital evidence controls, how to process crime and incident scenes, the details of data acquisition, computer forensic analysis, email investigations, image file recovery, investigative report writing, and expert witness requirements. The course provides a range of laboratory and hands on assignments that teach about theory as well as the practical application of computer forensic investigation. This course also is a required course for earning CNSS 4011-4016 certifications.

**Certification:** This course helps prepare students for the Access Data Certified Examiner Exam.

**Learning Outcomes:**

At the end of this course, the student will:

- A. determine the necessity for forensic preparedness procedures and recognize the appropriate moments for instigating an investigation and involving law enforcement;
- B. recognize typical forms of computer crime and abuse and the relevant evidence;
- C. assist in determining where and how evidence may be stored in computers, and how this evidence may be extracted without contamination;
- D. participate in the selection of appropriate tools for forensic investigation; and
- E. define current terminology within computer forensics.

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. prepare for computer investigations (A);
2. learn necessary forensic procedures (A);
3. identify various types of computer crime (B);
4. identify relevant evidence in computer crimes (B);
5. identify hidden evidence stored in a computer (C);
6. extract evidence hidden in a computer (C);
7. recognize various tools available for forensic investigations (D);

8. select appropriate tools required for investigation (D);
9. recognize NSTISS basics legal elements including: fraud, waste and abuse and investigate authorities (A, B);
10. recognize NSTISS basics countermeasures including: assessments (e.g., surveys, inspections) and cover and deception (D);
11. recognize NSTISS basics legal elements including: criminal prosecution and evidence collection and preservation (B,C);
12. recognize and apply NSTISS policies and procedures key management including: access, control and storage of COMSEC material, destruction procedures for COMSEC material, identify and inventory COMSEC material, key management protocols (bundling, electronic key, over-the-air rekeying) and report COMSEC incidents (C);
13. describe ATO and IATO and explain the purpose and contents of IATO (D);
14. explain the importance of risk assessment to support granting an IATO (D);
15. implement risk mitigation strategies necessary to obtain IATO (D);
16. describe recertification, how to direct the recertification effort, and explain the importance of the recertification process (D);
17. identify characteristics of information systems that need re-certification and how to initiate the recertification effort (D);
18. discuss the Systems Security Authorization Agreement (SSAA) , explain the importance of the SSAA, the contents of SSAA , and the purpose of SSAA (D);
19. explain the importance of the certification and accreditation (C&A) effort leading to accreditation (D);
20. ensure the certifier understands the mission and it is reflected in SSAA the C&A effort leading to SSAA and facilitate effort leading to SSAA (D);
21. explain the importance of evidence collection/preservation policies (B);
22. recognize the importance of the National Information Assurance (IA) Certification & Accreditation (C&A) Policy (D);
23. identify auditable events (C);
24. recognize investigative authorities and explain the importance of investigative authorities (A);
25. explain the importance and role of non-repudiation (D);
26. define CT&E as part of acquisition process (D);
27. recognize significance/results of certification tools (D);
28. explain the importance of facilities planning (D);
29. recognize responsibilities associated with accreditation and the roles associated with certification (D);
30. identify risks as it applies to certification (D);
31. recognize TEMPEST requirements and discuss threats from TEMPEST failures (D); and
32. identify threats from Emissions Security (EMSEC) and explain the importance of the threats from Emissions Security (EMSEC) (D).

**Course Requirements:**

1. This course may be offered as a face-to-face or an online course. The certification exam(s) for this course is required to be taken on campus or an approved proctored environment.
2. A student must successfully complete the course with an average of 70% or above on the combined learning outcomes.
3. Each student is expected to attend classes regularly; excessive unexcused absences constitute grounds for suspension (refer to the student handbook for attendance policies).

**Course Grading Scale:**

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

**Attendance Policy:** The college attendance policy is available at <http://www.bpcc.edu/catalog/current/academicpolicies.html>

**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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