

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: 9781337568999.

**Optional Textbook/Subscription Offers from Cengage:**

Cengage Unlimited, 1 term (4 month) Printed Access Card, 1<sup>st</sup> edition,  
PAC: 9780357700037 or IAC: 9780357700006

Cengage Unlimited, Multi-term (12 month) Printed Access Card, 1<sup>st</sup> edition,  
PAC: 9780357700044 or IAC: 9780357700013

Cengage Unlimited, Multi-term (24 month) Printed Access Card, 1<sup>st</sup> edition,  
PAC: 9780357700051 or IAC: 9780357700020

**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.

**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,D);
2. learn necessary forensic procedures (A,E);
3. identify various types of computer crime (B);
4. identify relevant evidence in computer crimes (B,D);
5. identify hidden evidence stored in a computer (C,D);
6. extract evidence hidden in a computer (C,D);
7. recognize various tools available for forensic investigations and how validation of tools is accomplished (D);
8. identify validation methods to include hashing (D);
9. select appropriate tools required for investigation (C,D);
10. recognize basic legal elements including: fraud, waste and abuse and investigate authorities (A, B);
11. recognize basic countermeasures including: assessments (e.g., surveys, inspections) and cover and deception (D,C);
12. recognize basic legal elements including: criminal prosecution and evidence collection and preservation (B,C);
13. identify characteristics of information systems that need re-certification and how to initiate the recertification effort (D);
14. explain the importance of the certification and accreditation (C&A) effort leading to accreditation (D);
15. explain the importance of evidence collection/preservation policies (B);
16. recognize the importance of the National Information Assurance (IA) Certification & Accreditation (C&A) Policy (D,E);
17. identify auditable events (C,D);
18. recognize investigative authorities and explain the importance of investigative authorities (A);
19. explain the importance and role of non-repudiation (D);
20. explain the importance of facilities planning (D,E); and recognize TEMPEST requirements and discuss threats from TEMPEST failures (D,E).

### **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**

Operate and Maintain (OM)    Analyze (AN)    Collect and Operate (CO)

Investigate (IN)

## Specializations

- Data Management Systems Security
- Data Security Analysis
- Digital Forensics
- Network Security Engineering
- Network Security Administration
- Secure Cloud Computing
- Secure Mobile Technology
- Secure Telecommunications
- Security Incident Analysis and Response
- System Security Administration
- Cyber Investigations

## CAE Knowledge Unit Mapping:

- Cloud Computing (CCO)
- Cybersecurity Ethics (CSE)
- Digital Forensics (DFS)
- Host Forensics (HOF)
- Media Forensics (MEF)
- Network Forensics (NWF)

## 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://catalog.bpcc.edu/content.php?catoid=5&navoid=369>

**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.

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