

**University of Arkansas - Fort Smith**  
**5210 Grand Avenue**  
**P. O. Box 3649**  
**Fort Smith, AR 72913-3649**  
**479-788-7000**

**General Syllabus**

**CS 3523 Computer Forensics**

Credit Hours: 3                      Lecture Hours: 3                      Laboratory or other types of Hours: 0

Prerequisites: Junior standing and consent of instructor

Effective Catalog: 2019-2020

**I. Course Information**

**A. Catalog Description**

Examines techniques and procedures to obtain evidence from a computer, network messages and logs. Topics include the preservation of data and evidentiary chain, legal aspects of the search and seizure of computers and related equipment/information. An introduction to different types of computer and networking architectures, characteristics of storage of modern computer architectures. Cybercrimes recognized internationally and by the United States will be introduced, along with the unique laws pertaining to them.

**B. Additional Information - None**

**II. Student Learning Outcomes**

**A. Subject Matter**

Upon successful completion of this course, the student will be able to:

1. Analyze and explain the role of computer and technology forensics in a criminal investigation.
2. Execute a fundamental computer forensic analysis using computer and network-based tools.
3. Assess and explain the underlying concepts of how data are stored on different types of computers.
4. Explain the general structure of the Internet.

5. Interpret the laws applying to the appropriation of computers for forensic analysis, citing what laws are relevant and apply under what circumstances

**B. University Learning Outcomes**

This course enhances student abilities in the following areas:

**Analytical Skills**

**Quantitative Reasoning:** Students will analyze patterns of activity to differentiate between normal and abnormal network activity, as well as to find information within the context of an investigation.

**III. Major Course Topics**

- A. Digital forensics and its relationship to other forensic disciplines
- B. Incident response responsibilities
- C. Forensic procedures
- D. Digital evidence and tracking
- E. Rules/standards of evidence
- F. Evidence gathering and analysis
- G. Forensic mechanisms
- H. Profiling
- I. Tools to support investigative work
- J. Legal systems
- K. Search and seizure
- L. Media analysis