

CS3601 Digital Forensics

Credit Hours: Three (3)

Instructor, Karl F. Lutzen, kfl@mst.edu, 215F Phelps Health Annex (573) 341-6398
(Email first before calling.)

Prerequisites: Computer Operating Systems

Textbook: Bill Nelson, Amelia Phillips, Christopher Steuart, Guide to Computer Forensics and Investigations Sixth Edition. Cengage Learning, 2018, ISBN-13: 978-1-337-56894-4.

Course Description

As the internet continues to expand, so do cyberthreats, be it from outside or inside attackers, human error, company policy violations and so on. Today's industry has a growing demand for digital forensic analysts with the demand outstripping the availability of analysts that understands the basic to medium concepts of digital forensics. This course is aimed directly at ensuring its students have that knowledge. We will be examining the topics that all digital forensic analysts need to understand, as well as some network forensics as time allows.

Course Objectives:

This course focuses on the use of the most popular forensics tools and provides specific guidance on dealing with civil and criminal matters relating to the law and technology. Includes discussions on how to manage a digital forensics operation in today's business environment.

Specific topic coverage includes:

- Understanding the Digital Forensics Profession and Investigations
- The Investigator's Office and Laboratory
- Data Acquisition
- Processing Crime and Incident Scenes
- Working with Windows and CLI Systems
- Current Digital Forensics Tools
- Linux and Macintosh File Systems
- Recovering Graphics Files
- Digital Forensics Analysis and Validation
- Virtual Machine Forensics, Live Acquisitions, and Network Forensics
- Email and Social Media
- Mobile Device Forensics
- Cloud Forensics
- Report Writing for High Tech Investigations
- Expert Testimony in High Tech Investigations
- Ethics for the Investigator and Expert Witness
- Network Forensics (if time allows)

information security management concepts. This course examines many of the information security management concepts and techniques that are necessary in today's complex information technology environment.

Course Description:

An overview of information security operations, access control, risk management, systems and application life cycle management, physical security, business continuity planning, telecommunications security, disaster recovery, software piracy, investigations, ethics and more. There will be extensive reporting, planning and policy writing.

Grading

4 Regular Exams @ 100 points each

There is NO comprehensive final exam in this course.

Homework: Weekly end of chapter and/or data set analysis reports): 25 points each

Reference Material

1. Besides the text book above, additional reference materials will be provided to students via the Canvas LMS.

Campus Policies

Academic Alert System: <http://academicalert.mst.edu>

I will utilize the online Academic Alert System. The purpose of the Academic Alert System is to improve the overall academic success of students by improving communication among students, instructors and advisors; reducing the time required for students to be informed of their academic status; and informing students of actions necessary by them in order to meet the academic requirements in their courses.

Disability Support Services: <http://dss.mst.edu>

Any student inquiring about academic accommodations because of a disability should be contact Disability Support Services so that appropriate and reasonable accommodative services can be determined and recommended. Disability Support Services is located in 204 Norwood Hall. Their phone number is 341-4211 and their email is dss@mst.edu.

If you have a documented disability and anticipate needing accommodations in this course, you are strongly encouraged to meet with me early in the semester. You will need to request that the

Disability Services staff send a letter to me verifying your disability and specifying the accommodation you will need before I can arrange your accommodation.

Academic Dishonesty: <http://registrar.mst.edu/academicregs/index.html>

Page 30 of the Student Academic Regulations handbook describes the student standard of conduct relative to the System's Collected Rules and Regulations section 200.010, and offers descriptions of academic dishonesty including cheating, plagiarism or sabotage. A description of the process for dealing with issues related to academic dishonesty, is available on-line at <http://ugs.mst.edu> .

Classroom Egress Maps:

Please familiarize yourself with the classroom egress maps posted on-line at: <http://registrar.mst.edu/links/egress.html> .