

Course Number	CS 413	Course Title	Digital Forensics				
Semester Hours	3	Course Coordinator	Henry Hexmoor				
Catalog Description	Cybersecurity has become a ubiquitous concern well beyond finding solutions to post-mortem threat analysis. The course provides a broad overview of security objectives and will cover fundamentals in confidentiality, integrity, and availability. Lectures will offer a broad range of topics on digital forensics. Students will be trained for an investigation mindset. Contemporary tools and techniques for digital forensics and investigations are reviewed. Security for stationary and mobile platforms are foci of current course in both forensic and active modes. There will be multiple hands-on homework and laboratories as well as a practical project as integral part of this course.						
Textbooks							
Haynes, D., 2014. A Practical Guide to Computer Forensics Investigations, Pearson, Pub.							
References							
<ul style="list-style-type: none"> • Campbell, R., et. al., 2014-2016, Introduction to Digital Forensics, UIUC. • Prorise, C. and Mandia, K., 2003. Incidence response and Computer Forensics, 3rd Edition, McGraw Hill Pub. 							
Course Learning Outcomes							
<ul style="list-style-type: none"> • Obtain the state-of-the-art knowledge on digital forensic methods including legal concerns • Obtain basic skills in digital storage capture and analysis of digital media 							
Assessment of the Contribution to Student Outcomes							
Outcome →	1	2	3	4	5	6	
Assessed →	X	X	X	X	X	X	
Prerequisites by Topic							
CS 410 or graduate standing							

Major Topics Covered in the Course

1. Digital Forensics Concepts and Legal issues (10 Lectures)
File System and digital artifact exploration methods
2. Online Investigations (10 Lectures)
3. Mobile Forensics (10 Lectures)
4. Mobile Network Forensics and Malware (10 Lectures)
 - a. Intrusion Detection (3 Lectures)
 - b. Mobile Phones (2 Lectures)
 - c. Network Forensics (3 Lectures)
 - d. Anti-forensics techniques (2 Lectures)