This course takes a hands-on approach to provide students with foundational concepts and practical skills in Mobile Device Forensics, which can be leveraged to perform forensically sound investigations against crimes involving the most complex mobile devices currently available in the market. Using modern tools and techniques, students will learn how to conduct a structured investigation process to determine the nature of the crime and to produce results that are useful in criminal proceedings. The course will provide walkthrough on various phases of the mobile forensics process for both Android and iOS based devices including forensically extracting, collecting, and analyzing, data and producing and disseminating reports. The course modules and labs will involve certain specialized hardware and software to perform data acquisition (including deleted data), and the analysis of extracted information.

B. Course Effective Dates: 08/20/2016 - Present

C. Outline of Major Content Areas:

See Course Description for major content areas.

D. Learning Outcomes (General)

1. Understand the current mobile device trends and related technology
2. Understand various file system structures that are utilized in different mobile devices
3. Explain mobile device forensics and how to perform forensically sound investigation on these devices.
4. Identify the common artifacts (from Android, and iOS operating systems) to look for during forensic investigation
5. Provide exposure to well-known and novel forensic methods using command-line and graphical open-source mobile forensics tools for examining a wide range of mobile device targets and artifacts.
6. Be able to acquire and analyze the data from mobile devices using forensically sound and industry standard tools
7. Explain the principles and practice of Ethics and Law for computer forensics investigators.
8. Present the evidence and conclusions of an investigation in a report format.
9. Analyze the security of mobile applications running on major platforms to identify various vulnerabilities that may exists in these applications.

E. Learning Outcomes (MN Transfer Curriculum)

This contains no goal areas.

G. Special Information

None