Department of Electrical and Computer Engineering

EEE 4XXX – Mobile Device Forensics Engineering

Catalog Description

This course will cover the fundamentals of the mobile forensics and media exploitation techniques to process cellphones, IPad, PDAs, and other mobile devices and introduces students to the related forensic software and hardware tools. Students will learn how to forensically preserve, acquire and analyze various types of files stored on mobile devices.

Catalog Objectives

- To give the students an understanding of what Mobile Forensics entails

- To give the students a hands-on exposure to the latest tools and techniques to prepare an investigative plan.

- To understand the common artifacts (from the Windows Mobile, Android, and iOS operating systems) to look for during forensic investigation

- To 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.

Prerequisites

- Knowledge of windows operating system
- EEE-4XXX (Introduction to Digital Forensics Engineering)

Textbooks

- Digital Forensics for Handheld Devices by Eamon P. Doherty (Aug 17, 2012)
- Android Forensics: Investigation, Analysis and Mobile Security for Google Android by Andrew Hoog (Jun 29, 2011)

Topics covered

- Ethical Issues
- Android System Artifacts
- Windows Mobile System Artifacts
- iOS System Artifacts
- GPS systems
- Memory and File System Analysis

Class schedule

Twice a week 75 minutes class with hands-on lab as part of the lectures

Contribution of course to meeting the professional component
Engineering science – 90% (math/science required for creative applications)
Engineering design – 10% (decision making process of devising a system, component or process to meet a desired need).

Relationship of course to program outcomes:
In the course EEE 4XXX – Mobile Device Forensics Engineering, the student will have to show
1. An ability to apply knowledge of mathematics, science, and engineering
2. An ability to design and conduct experiments, as well as to analyze and interpret data
3. An ability to identify, formulate, and solve engineering problems
4. An understanding of professional and ethical responsibility
5. Recognition of the need for, and an ability to engage in life-long learning
6. Knowledge of contemporary issues
7. An ability to use the techniques, skills and modern engineering tools necessary for engineering practice

Person who prepared this description and date of preparation:
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