



## **Department of Software Engineering**

### **COURSE SYLLABUS SENG 549 Digital Forensics**

**Spring 2015**

**Location:**      **Computer Lab No: 1**

**Class meeting times**  
Fi      09:00 – 11.30

**Instructor**  
Dr. Asaf Varol

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**Course description:**      This course introduces students to the fundamentals of digital forensics technology. Emphasis is placed on identifying threats to, and vulnerabilities of, computer systems and how to minimize them. Students will learn how hackers identify victims, how attacks are executed, and various methods used to access to computer systems.

**Course objectives:**      After taking this course, students will have the working knowledge:

- Digital Forensics and Information Assurance
- Computer Forensics and Crime Investigation
- Hacker behaviors – how to identify, enumerate and penetrate vulnerable systems on networks
- Computer basics – binary and hexadecimal vs. decimal, files, directories and data packets
- Network basics – OSI model, the functionality of network devices, e.g. hubs, switches and routers
- Cryptography

**Books:**

1. Mel, Baker, Burnett, Cryptography Decrypted, Addison Wesley Professional.
2. Michael G. Solomon, K. Rudolph, Ed Tittel, Neil Broom, and Diane Barrett, Computer Forensics, JumpStart, 2<sup>nd</sup> Edition, Wiley Publishing, Inc., 2011
3. Matjie T. Britz, Computer Forensics and Cyber Crime, 2<sup>nd</sup> edition, Prentice Hall, 2009
4. Michael E. Whitman, Herbert J. Mattord, Andrew Green, Principles of Incident Response & Disaster Recovery, Course Technology, 2014

**Course requirements:**

Assignments and

Labs:      Students will be required to complete given assignments and lab work.

Exams: Three exams, including the final exam, will be given. Students will be notified at least one week in advance of the exam dates. All examinations are written or application examinations. There are no make-up examinations available for any student.

Grading plan: Assignments and Labs 200  
Exam 1 200  
Exam 2 200  
Exam 3 (Final) 300

Attendance 100

$\geq 900 \Rightarrow A$

$\geq 800 \text{ but } < 900 \Rightarrow B$

$\geq 700 \text{ but } < 800 \Rightarrow C$

$\geq 600 \text{ but } < 700 \Rightarrow D$

$< 600 \Rightarrow F$

### **Class participation**

In accordance with University Policy, regular attendance is required; 100 points will be awarded for full attendance. For each missed class 5 points will be reduced. You are responsible for all material covered in every class, regardless of whether you attended or not. It is your responsibility to obtain notes, assignments, etc., from fellow class members if you miss a class.

### **Academic dishonesty**

Students are expected to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. The university and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including, but not limited to, cheating on an examination or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource materials. No cheating on an examination or assignments is allowed. A score of zero will be given to the student if such a case occurred.

### **Rules of conduct**

Students will refrain from behavior in the classroom that intentionally or unintentionally disrupts the learning process and, thus, impedes the mission of the university. Please turn off or mute your cellular phone and/or pager before class begins. Students are prohibited from eating in class, using tobacco products, making offensive remarks, reading newspapers, sleeping, talking among each other at inappropriate times, wearing inappropriate clothing, or engaging in any other form of distraction. Inappropriate behavior in the classroom shall result in a, minimally, a directive to leave class or being reported to the Dean of Students for disciplinary action in accordance with university policy.

### **Visitors in the classroom**

Occasion visiting of classes by responsible persons is allowed with prior arrangement with the instructor, as long as it does not interfere with the registered members of the class or the educational process.

### **Disabilities Act**

According to University policy requests for accommodations must be initiated by the student. A student seeking accommodations should go to the Dean Office for instructions.

### **Religious Holidays**

An institution of higher education shall excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence.