TCOM/CFRS 661 Sec 001 – Digital Media Forensics
Department of Electrical and Computer Engineering
George Mason University
Spring, 2010

Syllabus revised 1/10/10

Administrative Information
Instructor:

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Phone: 703-393-2247

Office hours: By appointment

Teaching Assistant
TBD

Course Description

TCOM/CFRS 661 - Digital Media Forensics (3:3:0)

Prerequisites: TCOM 548 and TCOM 556 or TCOM 562; a working knowledge of computer operating systems (e.g. CS 471 or equivalent) or permission from instructor. This course deals with the collection, preservation, and analysis of digital media such that the evidence can be successfully presented in a court of law (both civil and criminal). The relevant federal laws will be examined as well as private sector applications. The seizure, preservation, and analysis of digital media will be examined in this course.

Textbooks

  http://www.digital-evidence.org/

  http://www.wadsworth.com/cgi-wadsworth/course_products_wp.pl?fid=M20bI&flag=instructor&product_isbn_issn=9781418067335&disciplinenumber=206

Grading

Raw scores may be adjusted to calculate final grades. Grades will be assessed on the following components:

Homeworks (5@10% each) 50%
Mid-term exam 25%
Final exam 25%

These components are outlined in the following sections.
Homework
Homework 1 - Complete Case Project 2-4, Nelson p.72

Homework 2 - Complete Case Project 6-2, Nelson p.262

Homework 3 – Complete Hands on Project 6-2, Nelson p.259

Homework 4 - Complete Case Project 8-1, Nelson p.358

Homework 5 - Complete Hands-on Project 8-3, Nelson p.356

Homeworks will due in Weeks 4, 6, 9, 12, and 15. Late reports will be assessed a penalty of 25% of the assignment grade for each week or part there of it is late.

Mid-term exams
The mid-term exam will be conducted during class time in Week 9 and will cover material discussed in Weeks 1-7. The mid-term exam will be “closed book” – no reference materials other than those provided with the exam paper will be permitted.

Final exam
The final exam will be held the week after the final class in the same room used for classes and will cover material from the weeks 9-15. The final exam will be “closed book” – no reference materials other than those provided with the exam paper will be permitted.

Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Reading Assignments</th>
<th>Projects Due</th>
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<tr>
<td>Week 1</td>
<td>1/20/2010</td>
<td>Introduction/Legal Issues</td>
<td>Nelson Chapt.1 &amp; 2</td>
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<td>Week 2</td>
<td>1/27/2010</td>
<td>No Class</td>
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<td>Week 3</td>
<td>2/3/2010</td>
<td>Computer Forensic Investigation</td>
<td>Nelson Chapt. 7 &amp; 8</td>
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<td>Week 4</td>
<td>2/10/2010</td>
<td>Hard Drives</td>
<td>Carrier Chapt 5 &amp; 8</td>
<td>Report 1 due</td>
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<td>Week 5</td>
<td>2/17/2010</td>
<td>FAT File Systems</td>
<td>Carrier Chapt 9 &amp; 10</td>
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<td>Week 6</td>
<td>2/24/2010</td>
<td>NTFS</td>
<td>Carrier Chapt 11</td>
<td>Report 2 due</td>
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<td>Week 7</td>
<td>3/3/2010</td>
<td>NTFS cont.</td>
<td>Carrier Chapt 12 &amp; 13</td>
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<td>Week 8</td>
<td>3/10/2010</td>
<td>Spring Break</td>
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<td>Week 9</td>
<td>3/17/2010</td>
<td>Mid-term</td>
<td>Covers Weeks 1-7</td>
<td>Report 3 due</td>
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<td>Week 10</td>
<td>3/24/2010</td>
<td>Windows</td>
<td>Nelson Chapt. 6</td>
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<td>Week 11</td>
<td>3/31/2010</td>
<td>EXT2 &amp; Ext3</td>
<td>Carrier Chapt 14 &amp; 15</td>
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<tr>
<td>Week 12</td>
<td>4/7/2010</td>
<td>Linux OS</td>
<td>Nelson Chapt. 8</td>
<td>Report 4 due</td>
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<td>Week 13</td>
<td>4/14/2010</td>
<td>Cell Phone/ PDA</td>
<td>Nelson Chapt. 13</td>
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<td>Week 14</td>
<td>4/21/2010</td>
<td>RAID</td>
<td>Carrier Chapt 7</td>
<td>Report 5 due</td>
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<td>Week 15</td>
<td>4/28/2010</td>
<td>Counter Forensics</td>
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<tr>
<td>Week 16</td>
<td>5/6/2010</td>
<td>Final exam</td>
<td>Covers weeks 9-15</td>
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This schedule is subject to revision before and throughout the course.

Call 703–993–1000 for recorded information on campus closings (e.g. due to weather).

Important Dates
**Attendance Policy**
Students are expected to attend each class, to complete any required preparatory work (including assigned reading) and to participate actively in lectures, discussions and exercises. As members of the academic community, all students are expected to contribute regardless of their proficiency with the subject matter.

Students are expected to make prior arrangements with Instructor if they know in advance that they will miss any class and to consult with the Instructor if they miss any class without prior notice.

Departmental policy requires students to take exams at the scheduled time and place, unless there are truly compelling circumstances supported by appropriate documentation. Except in such circumstances, failure to attend a scheduled exam may result in a grade of zero (0) for that exam.

**Communications**
Communication on issues relating to the individual student should be conducted using email or telephone. Email is the preferred method – for urgent messages, you should also attempt to contact the Instructor via telephone. Email messages from the Instructor to all class members will be sent to students’ GMU email addresses – if you use another email account as your primary address, you should forward your GMU email to that account.

Lecture slides are complements to the lecture process, not substitutes for it - access to lecture slides will be provided as a courtesy to students provided acceptable attendance is maintained.

**Honor Code**
Students are required to be familiar and comply with the requirements of the GMU Honor Code\[1\].

The Honor Code will be strictly enforced in this course.

All assessable work is to be completed by the individual student.

Students must **NOT** collaborate on the project reports or presentation without explicit prior permission from the Instructor.

\[1\] Available at http://catalog.gmu.edu/content.php?catoid=5&navoid=410#Honor and related GMU Web pages.