

**TCOM/CFRS 661–Digital Media Forensics**  
**Department of Electrical and Computer Engineering**  
**George Mason University**  
**Fall 2016**

**Syllabus** (revised 2016 - August 03)

**Administrative Information**

Instructor: Juan C. Diaz

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Office hours: By appointment

Teaching Assistant: N/A

Classes: Monday, ENG 5358 (Engineering Building, Room 5358), 4:30 pm – 7:10 pm

**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.

**\* This course will be presented ON-LINE and in the classroom.**

**Textbooks and Required Equipment**

- Digital Forensics Workbook by Michael K. Robinson (ISBN: 1517713609/ISBN-13: 978-1517713607) - **MANDATORY**
- Additional required supplies:
  - Microphone for on-line discussions - mandatory
  - Thumb drive - 8 to 16 gigabytes preferred
  - External hard drive (250 GB minimum, NTFS only) - due on the first day of class

**Grading**

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

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|-------------------------|-----|
| ○ Homework (4@10% each) | 40% |
| ○ Mid-term exam         | 20% |
| ○ Final exam            | 20% |
| ○ Class participation   | 20% |

These components are outlined in the following sections.

### **Homework**

Provide a weekly one slide PowerPoint presentation on an article relative to course content. The article should not come from advertisement or blogs. Additionally, four projects (Homework) will be assigned during the semester (see schedule).

### **Mid-term Exams**

The mid-term exam will be taken in class and will cover material discussed in Weeks 1-6.

### **Final Exam**

The final exam will be taken in class and will cover material discussed 9-14.

### **Schedule (\*will be taught on-line)**

<b>Week</b>	<b>Date</b>	<b>Topic</b>	<b>Reading Assignments</b>	<b>Projects Due</b>
Week 1	8/9/2016	Introduction/Legal Issues		
Week 2	9/5/2016	No class - Labor Day		
Week 3	9/12/2016	*Computer Incident Response (Crime Scene documentation)	DFW – Chapters 1-3 News article Pres.	Complete exercises
Week 4	9/19/2016	*Data Acquisition and Duplication	News article Pres.	Complete exercises
Week 5	9/26/2016	Crime Scene Practical / Data Acquisition exercise		Due: Homework #1
Week 6	10/3/2016	*Windows File System FAT	DFW – Chapters 4-6 News article Pres.	Complete exercises
Week 7	10/11/2016	*Windows File System NTFS	News article Pres.	Due: Homework #2
Week 8	10/17/2016	Mid Term		
Week 9	10/24/2016	Spring Break		
Week 10	10/31/2016	*Windows Registry	DFW – Chapters 7-10 News article Pres.	Complete exercises
Week 11	11/7/2016	Windows Forensics Nuix	DFW – Chapters 11-12 News article Pres.	Complete exercise
Week 12	11/14/2016	Windows Forensics Blacklight		Due: Homework #3
Week 13	11/21/2016	*Managing a Computer Forensics Lab	DFW – Chapters 13-15 News article Pres.	Complete exercises
Week 14	11/28/2016	Forensics Laboratory Visit		Due: Homework #4
Week 15	12/5/2016	*Analysis Methodology	DFW – Chapters 17,18,21 News article Pres.	Complete exercises

Week 16	12/12/2016	Courtroom Presentation		
Week 17	12/19/2016	Final exam		

***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).

### **Volgenau School of Engineering Librarian**

Please contact Ms. Theresa Calcagno ( Phone: 703-993-3712; E-mail: tcalcagn@gmu.edu), Librarian, for library resources assistance and research support.

### **Important Dates**

Religious holiday calendar [http://ulife.gmu.edu/religious\\_calendar.php](http://ulife.gmu.edu/religious_calendar.php)

### **Attendance Policy**

Students are expected to attend each class, whether on-line or in person, 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<sup>\[1\]</sup>](#).

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 exams.

In order to be able to fully exchange information and insure complete candor in discussions, the policy of non-attribution will be STRICTLY enforced.

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

## **Disability Accommodations:**

*If you have a documented learning disability or other condition that may affect academic performance you should: 1) make sure this documentation is on file with Office of Disability Services (SUB I, Rm. 4205; 993-2474; <http://ods.gmu.edu>) to determine the accommodations you need; and 2) talk with me to discuss your accommodation needs.*

If you are a student with a disability and you need academic accommodations, please see me and contact the Office of Disability Services (ODS) at 993-2474, <http://ods.gmu.edu>. All academic accommodations must be arranged through the ODS.

If you have a learning or physical difference that may affect your academic work, you will need to furnish appropriate documentation to the Office of Disability Services. If you qualify for accommodation, the ODS staff will give you a form detailing appropriate accommodations for your instructor. In addition to providing your professors with the appropriate form, please take the initiative to discuss accommodation with them at the beginning of the semester and as needed during the term. Because of the range of learning differences, faculty members need to learn from you the most effective ways to assist you. If you have contacted the Office of Disability Services and are waiting to hear from a counselor, please inform me.

## **Privacy:**

Students must use their MasonLive email account to receive important University information, including messages related to this class. See <http://masonlive.gmu.edu> for more information.