



Integrated Science & Technology 463
Digital Evidence & Investigations
Course Syllabus

Spring 2010,
MWF 10:00 AM – 10:50 PM
Morrow Library 121

Instructor – John Sammons
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Office Hours:

Textbooks

The following textbooks are required for the course:

Windows Forensic Analysis DVD Toolkit, Second Edition
by Harlan Carvey. Published by Syngress;
(June, 2009). ISBN# 978-1597494229

Course Description

Introduction to the principles, practices and tools of digital forensics, digital investigations and electronic discovery.

Credit

The course is three (3) credit hours.

Pre/co-requisites

IST 264 Hardware Technologies

Desired Objectives/Outcomes

Long after this course is over, you should:

Foundational Knowledge

- Understand the fundamentals of investigations
- Understand how cell phones store data and the artifacts associated with them
- Understand the forensic fundamentals of Windows and Mac file and operating systems as well as applications
- Understand the elementary principles of encryption

Application

- Write a basic search warrant affidavit for digital evidence
- Use the Cellebrite kit to successfully clone a cell phone
- Use the Logicube Dossier to clone a hard drive

- Collect digital evidence from a crime scene

Integration

- Integrate investigative thinking into their digital forensic analysis

Human Dimension

- Come to see themselves as members of the forensic community

Caring

- Understand the stakes involved in the practice of digital forensics
- Realize the seriousness of using a search warrant to invade someone privacy

Learning How to Learn

- Be able to identify and use important resources for their own learning after graduation

Instruction method

There will be 3 contact hours of classroom instruction per week. This is a (experimental) writing intensive course. As such, writing assignments constitute a significant part of the course. Coursework will include classroom lectures, a learning journal, and exams along with a variety of low, med and high stakes writing assignments. This course also places a great emphasis on active learning rather than the traditional “lecture only” method of delivery.

There is a writing guide for the course located on Blackboard. The guide explains the writing requirements and assignments in greater detail.

File Names: All electronic submissions must follow this file naming convention:

Ist463_Last Name_First Initial_Assignment Name.doc (“ist264_sammons_j_researchpaper.doc”)

Evaluation method

Evaluation of the student's performance will be based on the quality of your writing assignments and exam results. Evaluation criteria for writing assignments will be distributed in advance in the form of rubrics. A comprehensive study guide will be provided before each exam.

Course Grading Policy

Midterm Exam	20%
Final Exam	20%
Learning Journal	20%
Research Paper	20%
Writing Assignments	10%
Professionalism	10%

Final letter grades are determined based on the following grading scale:

90-100%	A
80-89%	B
70-79%	C
60-69%	D
Below 60	F

The instructor reserves the right to change these values depending on the overall class performance and/or extenuating circumstances.

Policy Statement

My Academic Dishonesty Policy

Academic Dishonesty is defined as any act of a dishonorable nature which gives the student engaged in it an unfair advantage over others engaged in the same or similar course of study and which, if known to the classroom instructor in such course of study, would be prohibited. Academic Dishonesty will not be tolerated as these actions are fundamentally opposed to "assuring the integrity of the curriculum through the maintenance of rigorous standards and high expectations for student learning and performance" as described in Marshall University's Statement of Philosophy.

If you are found cheating on projects or plagiarizing answers from the Internet or other sources (among other things), there will be no second chance. Your penalty is that you will receive a failing grade for the course. In those cases in which the offense is particularly flagrant or where there are other aggravating circumstances, additional, non-academic, sanctions may be pursued through the Office of Judicial Affairs. Notice of an act of academic dishonesty will be reported to the Department Chair, Dean of the College of Science, and to the Office of Academic Affairs. Please refer to the Marshall University Undergraduate Catalog for a full definition of academic dishonesty.

Your assignments may be analyzed using the anti-plagiarism suite of tools powered by Turnitin. Please visit <http://turnitin.com> for more information.

Assignments: The course includes a number of writing assignments. All assignments are due **BY THE BEGINNING OF CLASS** on their due date. **NO LATE ASSIGNMENTS WILL BE ACCEPTED.** Please do not procrastinate. If you wait until the last night to start a writing assignment, chances are, you will fail.

Exams: There are TWO exams worth 40% of your overall grade. Exact dates and times of exams will be announced in class.

Make-up Exams and Late Penalty: Make-up exams will not be given except under unusual circumstances and satisfactory written justification. Any student who misses an exam due to an unexcused absence will receive a grade of zero for that exam with no opportunity for make-up or substitution. University excused absences or those occurring with a good reason (and that reason must be given prior to missing the exam – call and leave a message if you have to) will be excused. Make up exams must be taken within one week of the original scheduled date. The decision whether to give a make up exam rests with the instructor.

Policy for Students with Disabilities: Marshall University is committed to equal opportunity in education for all students, including those with physical, learning and psychological disabilities. University policy states that it is the responsibility of students with disabilities to contact the Office of Disabled Student Services (DSS) in Prichard Hall 117, phone 304 696-2271 to provide documentation of their disability.

Following this, the DSS Coordinator will send a letter to each of the student's instructors outlining the academic accommodation he/she will need to ensure equality in classroom experiences, outside assignment, testing and grading. The instructor and student will meet to discuss how the accommodation(s) requested will be provided. For more information, please visit <http://www.marshall.edu/disabled> or contact Disabled Student Services Office at Prichard Hall 11, phone 304-696-2271.

Attendance Statement

Attendance is very important in this course. This course is centered around active learning which includes in-class discussions and journal assignments. Your participation in these exercises impacts your learning and your grade. It also impacts the overall quality of the course for everyone. In short, we (the other students and I) need you in class. That said, I also understand that other things come up. You will be allowed three unexcused absences during the semester. After that, your professionalism grade will be reduced for each absence.

Professionalism

In this 400 level course, you will be treated as professionals and will be expected to behave and perform as such. As professionals, you will be expected to attend class, be on time, complete all of your assignments, meet deadlines, ask questions when you don't understand, and participate. If you have to miss class, I expect you to let me know in advance. Your classroom language and demeanor should also be professional.

If you miss class, it is your responsibility to catch up on material missed, and it will not be the responsibility of the instructor to catch you up on material missed during office hours, or re-lecture to you.

Withdrawal Policy

The University withdrawal policy is followed in this course. The last day to drop an individual course for the Fall Semester is April 30, 2010.

University Holidays & Key Dates

January 18, Monday

Martin Luther King, Jr. Holiday – University Closed

March 19, Friday

Last Day to Drop a Full Semester Individual Course

March 21, Sunday – March 28, Sunday

Spring Break – Classes Dismissed

March 29, Monday

Classes Resume

April 7

Assessment Day

April 26, Monday – May 7, Friday

“Dead Week”

April 30, Friday

Last Class Day and Last Day to Completely Withdraw For Spring Semester

May 3, Monday

Final Exam

10:15AM – 12:15PM

Topics and Methodology

The following outline delineates the tentative class schedule with topics to be addressed during the course. Please note this is a tentative schedule and it may change upon class progress:

Week	Lecture Topics	Reading Assignments
1	Concept Mapping & Journal Writing, Fundamentals of Investigations, Search Warrants	TBA
2	Search Warrants, Windows File Systems	TBA
3	Mac & Linux File Systems, Search & Seizure of Digital Evidence	TBA
4	Cell Phones	TBA
5	Alternative Data Sources, Live Response, Memory Analysis	Chap 1 & Chap 3
6	Internet Forensics, Windows Registry	Chap 4
7	Internet Forensics, Windows Registry, Mid-Term	Chap 4
8	Encryption, Recycle BIN	Chap 5
9	eMail Forensics, Cybercrime	TBA
10	System & Security Artifacts	Chap 5
11	Application Behavior, File Analysis	Chap 5
12	Crime Scene Practical	TBA
13	eDiscovery/Admissibility of digital evidence	TBA
14	Case Studies, Criminal Law Application. Building a Case	Chap 8
15	Projects Due & Final Review	
Final Exam	Monday, May 3, 10:15 – 12:15	

For each topic discussed in the textbook, specific experience of other students and the instructor will be discussed to enhance the characteristics involved. Additional material may also be covered in the class.

Every student is responsible for all materials presented in class, including lectures, notes, and handouts. In case you are not present for a class, it is your responsibility to contact the instructor and receive information about the material presented in that class. Class attendance is VERY IMPORTANT and part of professionalism grade for this course.

Effort Required

For every one hour in class, the student is expected to put in an effort of at least 3 hours outside the class for studying and completing writing assignments. Depending upon background and preparedness, some students may have to put in additional effort. **PLEASE DO NOT PROCRASTINATE.** Prioritize, schedule, and take responsibility for your actions and you should do very well in this class.

Communication

Private E-mail will be used to make any general announcements, last minute changes, etc. It is **mandatory** that you

monitor your email messages at least once a day. PLEASE ONLY USE MY MARSHALL EMAIL ADDRESS FOR CORRESPONDENCE. Messages left on Blackboard may result in delayed responses.

Note about cell phones in class

Please set your cell phone ringer to "Vibrate Only" mode (or turn it off) before you enter the classroom.

Social Networking

I often receive friend requests from students via Facebook. It is my policy however, not to accept these requests from current students. This is absolutely nothing personal, so please do not take it as such. You are welcome to follow me on Twitter and or join my network on Linked-In.