

Course Syllabus

XCPD-561	Advanced Forensic Techniques		
Location	<p>Clarendon Campus</p> <p>3101 Wilson Boulevard, Suite 200 Arlington, VA 22201 (202) 687-7000</p>		
Course Instructor	<p>Chris McGrath, CPA, CFE jcm234@georgetown.edu</p>		
Course Text / Packet	<p>No textbook is required; course materials to be provided.</p> <p>Optional Text: Principles of Fraud Examination, 2nd Ed.; by Joseph T. Wells; Pub. John Wiley & Sons; ISBN 13: 978-0-470-12883-1</p>		
Office Hours	<p>Immediately before class by appointment. Email dialogue can augment this process as well.</p>		
Course Abstract:	<p>This class concentrates on advance tools to detect fraud. The emphasis will be on computer assisted forensic techniques. Statistical techniques, data quality integrity and computer recovery methodologies will be reviewed.</p>		
Learning Objectives:	<p>At the completion of the course, a successful student will be able to:</p> <ul style="list-style-type: none"> ▪ Understand the complexities of finding fraud in the computer environment ▪ Know the difference between Computer Assurance and Crime Scene Investigation ▪ See the examination process, primarily on financial systems in the corporate environment ▪ Sample tools (methodologies) to detect fraud ▪ Know processes for computer recovery and data quality integrity 		
Grading Procedure	<p>Students must attend the entire class time and participate in all discussions and cases to receive a successful completion. Exceptions are not allowed unless specifically approved by the Instructor prior to class time.</p>		
Class Participation	<p>You are expected to interact in class with the instructor, fellow students and guest speakers.</p> <p>The give-and-take of information, ideas, insights and feelings is essential to the success of this class. Thoughtful, informed, balanced, candid, emotionally grounded speech is most helpful.</p>		
Professionalism	<p>Students are expected to act in a professional manner, meeting deadlines, solving problems, cooperating with classmates, and generally contributing in a positive way to the class. Working in communications often means searching for solutions in a group context. Teamwork, listening, empathy, enthusiasm, emotional maturity and consideration of other people's concerns are all essential to success. Please bring these qualities and values with you to class. It is as important to "practice" these interpersonal skills as it is to learn how to tell a compelling visual story. Students will be evaluated on their professional demeanor in class.</p>		
Note on "Off the Record"	<p>Everything discussed in class by the instructors, students or guest speakers is off-the-record! It should not show up in the newspaper, radio station, TV or any other media. No exceptions!</p>		

<p>Caveats</p>	<p>I: The information, procedures and schedule included in this syllabus are subject to change. There WILL BE modifications to the syllabus.</p> <p>II: Laptops will be monitored for the procedure of TAKING NOTES in class and not for internet browsing, email or instant messaging.</p> <p>III: No cell phones communication allowed. Please turn cell phones off and no texting.</p>
<p>Guest Speakers</p>	<p>The class may host several guest speakers. Usually, questions will be allowed. Please keep in mind that all information is “off-the-record” and confidential.</p>
<p>Part I</p>	<ol style="list-style-type: none"> 1. Introduction <ol style="list-style-type: none"> a. History of computer forensics b. Evidence, Warrants, 4th Amendment, and Commonwealth v. Copenhefer c. Computer evidence d. Activities of an investigator e. Class discussion – manager surfing restricted websites f. Basic Process 2. Crime Scene Investigating <ol style="list-style-type: none"> a. Preservation b. Collection c. Analysis d. Legal evidence 3. The Business Environment <ol style="list-style-type: none"> a. Taking a step back b. The risk of doing business c. Basic processes and business d. The business need e. Computer Assurance vs. Crime Scene Investigation 4. Business and IT <ol style="list-style-type: none"> a. Risk, threats and controls b. The computerized business <ol style="list-style-type: none"> i. Business elements ii. Business model iii. Barings c. Looking at data d. Case 1 – Travel reimbursements e. Business cycles 5. Expenditure cycle <ol style="list-style-type: none"> a. Attributes of integrity b. How to test? c. Case 2 – You are the new controller
<p>Part II</p>	<ol style="list-style-type: none"> 1. Computer forensic case <ol style="list-style-type: none"> a. Database forensics b. Computer evidence 2. Chain of custody <ol style="list-style-type: none"> a. Disk evidence b. What is evidence? c. E-Discovery d. Best evidence rule 3. Obtaining evidence 4. Recent trends <ol style="list-style-type: none"> a. Emails: Federal Rules of Civil Procedure b. Tools (Encase, F.R.E.D., Common tools) 5. Analysis <ol style="list-style-type: none"> a. Logs

	<ul style="list-style-type: none">b. Metadatac. Steganography (example) <p>6. More evidence</p> <ul style="list-style-type: none">a. Emailsb. Frying a hard diskc. Company secrets <p>7. Best practices</p>
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