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School of Science and Technology Department of Information Technology ISSC630: Advanced Cybercrime Analysis 3 Credit Hours 8 Week Session Prerequisite(s): None

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#### Instructor Information

Instructor: Email: Phone: Office Hours:

> NOTE: IT IS IMPORTANT THAT THE STUDENT READ THE ENTIRE STUDENT SYLLABUS THOROUGHLY. THIS DOCUMENT DETAILS MY GOALS AND EXPECTATIONS FOR THIS COURSE AND PROVIDES ALL OF THE NECESSARY INFORMATION CONCERNING ASSIGNMENTS, GRADING AND ADDITIONAL COURSE REQUIREMENTS.

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### **Course Description (Catalog)**

The global reach of the Internet, the low cost of online activity, and the relative anonymity of users has led to an increase in computer related crimes. This course focuses on cybercrime investigation and prevention; it appraises the legal issues related to on-line criminal conduct, the collection of electronic evidence, and the onslaught of new technology. This course also analyzes the phases, processes, and challenges of cybercrime investigations, and it examines technical, legal, and social issues relating to the search and seizure of digital evidence and computer forensics. Students will encounter the challenges of the latency between technology and the law.

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#### Course Scope

This course is designed to enable students to concentrate on the legal issues and challenges that the changes in technology have created. Crimes such as identity theft, fraud, software protection, cyberterrorism, property rights violations and online stalking will be explored. This course will examine how laws have expanded and changed to account for the increase of crimes in the digital age. Primarily because of, but not entirely due to the Internet, crimes such as identity theft have become more common than in past. This course will examine computer laws such as the Computer Fraud and Abuse Act, Electronics Communications Privacy Act, Communication Decency Act, and the Digital Millennium Act. We will examine the techniques and guidelines for observing, collecting, documenting and storing of electronic evidence, as well as, preparing for depositions and trials. These issues, and more, will be addressed by an examination of the current literature on these topics.

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#### **Course Objectives**

A successful student will fulfill the following learning objectives:

- 1. The course will familiarize students with the dimensions of criminal activity and the use of surveillance in the world of cyber security. The methods used to commit cybercrimes and the techniques utilized to detect such crimes.
- 2. Students will be given a broad overview of relevant topics to include online crimes such as identity theft, online child victimization, cyber attacks, and cyberstalking.
- 3. Examine technology relevant to electronic evidence. Students will learn how to categorize and analyze types of computer crimes, such as when a computer is a target, when the computer is used as a weapon and using the computer as an accessory.
- 4. Understanding the social and economic impacts of cybercrime. Students will examine the role of economics as it relates to crime and its impact on the criminal justice system.
- 5. This course will provide students with the understanding of the laws and legal issues as they relate to cybercrime. Students will be presented with new and challenging problems pertaining to cyberlaw.
- 6. This course will present students with the appropriate actions and protocol involved in the thorough collection, preservation, and presentation of evidentiary material.
- 7. Knowledge of how to investigate and prosecute a cybercrime case, as well as, the principles of criminal evidence. Students will learn the analysis of the rules of evidence such as chain of custody, preservation of evidence, and procedural requirements.
- 8. Gain an understanding of organized crime and international crime on the Internet. Differentiate between various types of computer crime and determine if a crime has been committed, according to the facts of the case.

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#### **Course Delivery Method**

This course delivered via distance learning will enable students to complete academic work in a flexible manner, completely online. Course materials and access to an online learning management system will be made available to each student. **Online assignments are due by the last day of each week** and include Forum questions (accomplished in groups through a threaded Forum), examinations and quizzes (graded electronically), and individual assignments (submitted for review by the Faculty Member). Assigned faculty will support the students throughout this eight-week course.

#### **Course Materials**

- Eastton, C., & Taylor, J. (2010). *Computer crime, investigation and the law.* Massachusetts, Cengage Learning ISBN: 978-1-5354-5532-0
- Shinder, D.L., & Cross, M. (2008). Scene of the cybercrime (2<sup>nd</sup> ed.). Massachusetts, Syngress Publishing, Inc. ISBN: 978-1-59749-276-8

**Reference:** Blackley, J. A., Peltier, J., & Peltier, T. (2003) *Information Security Fundamentals, 1<sup>st</sup> ed.* Boca Raton, FL. Auerbach Publications. ISBN: 0849319579/9780849319570

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### **Evaluation Procedures**

**Course Requirements:** Your final grade will be based on the following course requirements and percentages:

Course Requirement		
1. Forum Activities ( 8 Weekly Forums)	32	
2. Weekly Assignments – ( 7 Weekly Assignments)	21	
3. Outline #1 and Term Paper #1 – Outline (1pt) Term Paper (22 pts)	23	
4. Outline #2 and Term Paper #2 – Outline (1pt) Term Paper (23 pts)	24	
Total	100	

Submit assignments to your student folder, and make sure you select the correct assignment association. Please name your submitted document with your last name as the first part of the file name. For example, Assignment #1 could be named, Lastname\_Assignment1.doc. Forum assignments only need to be posted on the Forum. It is not necessary to submit a word document containing your Forum posts. Simply submit your discussion posts using the submit button and I will review them and update your assignment grade accordingly.

**Reference:** American Psychological Association. (2010). *Publication manual of the American Psychological Association* (6<sup>th</sup> edition). Washington, DC: Author. ISBN: 1-4338-0561-8

#### Assignment Requirements

This course has a strong writing component. The goal is to organize, synthesize, and demonstrate your comprehension of core concepts investigated during this course by applying a combination of the terms, concepts, and details you have learned in a systematic way. As important as "the details" that you analyze and arrange in your writing, however, are the conclusions you draw from those details, and your predictions, responses to, and ultimate interpretation of those details.

Assignments are due by Sunday 11:59 p.m. ET of the week in which they are assigned. If you need an extension, please contact me via email to discuss your circumstances. Assignments submitted late without prearranged extension will be subject to a 10% per day late penalty. For example, if you post a late assignment 1 day after the due you will receive a 10% penalty. If the assignment is submitted two weeks after the due date you will receive an additional 10% resulting in a 20% deduction in the grade. Please pay attention to the assignment due dates to avoid having points deducted from your grade. No late assignments will be accepted after the last day of the course.

### FORUM ACTIVITIES:

Each Forum activity will consist of one or more threads/topics. The assignments may involve discussion or debate. The guestions are designed to allow you to apply what you have learned in the chapters to real-world scenarios or hypothetical, but realistic, situations. Post your answers to the questions in each thread prior to 11:59 p.m. ET on Sunday at 11:59 pm. It is strongly advised that you do not wait until Sunday to post your answers. You are required to respond to at least two of your classmates post by 11:59. By waiting until Sunday to post might not give you proper time to respond by the deadline. Please do not be late with this post because your classmates will be relying on you to post on time. Please do not be late with this post because your classmates will be relying on you to post on time to give them a post to respond to later in the week. A discussion period will then ensue from Thursday through Sunday. Read your classmates' posts and post at least two follow-up messages to your classmates' posts in each thread prior to 11:59 p.m. ET on Sunday. Some threads may require you to post more than two replies, so make sure you read the directions carefully. Of course, you may always post more than the required number of replies and you are encouraged to continue participating in the discussion even after you have met the minimum number of posts required. Your Forum participation will be considered at the end of the semester if your grade is on the borderline. Borderline grades will only be rounded up if you have exceeded the minimum requirements on the Forum and shown insight and critical thinking in all of your posts and replies. Your follow-up posts must contain substance and should add additional insight to your classmates' opinions or challenge their opinions. It is never sufficient to simply say, "I agree with what you wrote" or "I really liked your post." You must use your follow-up posts as a way to continue the discussion at a high level of discourse. Be sure to read the follow-up posts to your own posts and reply to any questions or requests for clarification, including questions posted by your professor. You will be expected to log into the classroom several times each week to participate in the class discussion. Forum postings are a large part of your grade and I will be looking for guality and depth in your postings. I will also expect you to list your references at the end of each post. References should be in APA citation format.

#### **TERM PAPERS:**

You will be required to write two term papers this semester. Details on the term papers will be listed under the assignments section. General specifications are as follows:

- 1. You must write two 12-16 page term papers on computer related crime, forensics or cyber security. TOPICS MUST BE APPROVED.
- 2. Term paper #1 is due at the end of week 4
- 3. Term paper #2 is due at the end of week 8.
- 4. In addition to the 12-16 pages of the paper itself, you must include a title page and a references page. Your title page must include the title of your paper, the date, the name of this course, your name, and your instructor's name.
- 5. Your references page must be written in APA citation style Arial 11 or 12-point font or Times New Roman styles. You must cite a minimum of ten (10) outside sources.
- 6. Page margins Top, Bottom, Left Side and Right Side = 1 inch, with reasonable accommodation being made for special situations
- 7. Your paper must be in your own words, representing original work. Paraphrases of others' work must include attributions to the authors. Limit quotations to an average of no more than 3-5 lines, and use quotations sparingly! It is always better to paraphrase than to directly quote.
- 8. Papers must be submitted to <u>www.turnitin.com</u> for review. PAPERS WITH AN ORIGINALITY REPORT FROM TURNITIN OVER 15% OR OVER 2% FROM A SINGLE SOURCE WILL RESULT IN A SIGNIFICANT POINT REDUCTION.
- 9. PER THE STUDENT HANDBOOK, YOU CANNOT SUBMIT A PAPER THAT HAS BEEN SUBMITTED IN ANOTHER COURSE.

#### **Course Outline**

<u>Week</u>	<u>Topic(s)</u>	<u>Learning</u> Objective(s)	Reading(s)	Assignment(s)
1	Introduction & History of Computer Crime	1, 2	Easttom & Taylor Ch 1-2 Shinder & Cross Ch2	Week 1 Discussion Assignment #1
2	U.S. Computer Laws	1, 3, 4	Easttom & Taylor Ch 3-4	Week 2 Discussion Assignment #2 Paper Outline #1
3	Techniques, Collecting & Documenting Evidence	2,4,5	Easttom & Taylor Ch 5-6-7 Shinder & Cross Ch5	Week 3 Discussion Assignment #3
4	Collecting Evidence from Hardware and the Operating System	1, 6, 7	Easttom & Taylor Ch 8-9 Shinder & Cross Ch 6-7	Week 4 Discussion Assignment #4 Term Paper #1
5	Litigation & Deposition of Trials	1, 8	Easttom & Taylor Ch 10-11- 12 Shinder & Cross Ch 8	Week 5 Discussion Assignment #5 Paper Outline #2
6	Civil Matters and Online Protection	1,2,4,5	Easttom & Taylor Ch 13-14- 15 Shinder & Cross Ch 17	Week 6 Discussion Assignment #6
7	Harassment, Stalking & Hacker Techniques	3,4,8	Easttom & Taylor Ch 16-17	Week 7 Discussion Assignment #7
8	How Cybercriminals Communicate	1, 4,7	Easttom & Taylor Ch 18	Week 8 Discussion Term Paper #2

### Policies

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Please see the student handbook to reference all University policies. Quick links to frequently question asked about policies are listed below.

Drop/Withdrawal Policy Plagiarism Policy Extension Process and Policy

### WRITING EXPECTATIONS

All written submissions should be submitted in a font and page set-up that is readable and neat. It is recommended that students try to adhere to a consistent format, which is described below.

- Typewritten in double-spaced format with a readable style and font and submitted inside the electronic classroom (unless classroom access is not possible and other arrangements have been approved by the professor).
- Arial 11 or 12-point font or Times New Roman styles.
- Page margins Top, Bottom, Left Side and Right Side = 1 inch, with reasonable accommodation being made for special situations and online submission variances.

### CITATION AND REFERENCE STYLE

Assignments completed in a narrative essay or composition format must follow APA guidelines. This course will require students to use the citation and reference style established by the American Psychological Association (APA), in which case students should follow the guidelines set forth in *Publication Manual of the American Psychological Association* (6<sup>th</sup> ed.). (2010). Washington, D.C.: American Psychological Association.

## LATE ASSIGNMENTS

Students are expected to submit classroom assignments by the posted due date and to complete the course according to the published class schedule. As adults, students, and working professionals I understand you must manage competing demands on your time. Should you need additional time to complete an assignment please contact me before the due date so we can discuss the situation and determine an acceptable resolution. Routine submission of late assignments is unacceptable and may result in points deducted from your final course grade. Assignments submitted late without prearranged extension will be subject to a 10% per day late penalty. For example, if you post a late assignment 1 day after the due you will receive a 10% penalty. If the assignment is submitted two weeks after the due date you will receive an additional 10% resulting in a 20% deduction in the grade. Please pay attention to the assignment due dates to avoid having points deducted from your grade. No late assignments will be accepted after the last day of the course.

### DISCLAIMER STATEMENT

Course content may vary from the outline to meet the needs of this particular group.

#### **Academic Services**

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### ONLINE LIBRARY RESEARCH CENTER & LEARNING RESOURCES

The Online Library Resource Center is available to enrolled students and faculty from inside the electronic campus. This is your starting point for access to online books, subscription periodicals, and Web resources that are designed to support your classes and generally not available through search engines on the open Web. In addition, the Center provides access to special learning resources, which the University has contracted to assist with your studies. Questions can be directed to orc@apus.edu.

- **Charles Town Library and Inter Library Loan:** The University maintains a special library with a limited number of supporting volumes, collection of our professors' publication, and services to search and borrow research books and articles from other libraries.
- *Electronic Books:* You can use the online library to uncover and download over 50,000 titles, which have been scanned and made available in electronic format.
- *Electronic Journals:* The University provides access to over 12,000 journals, which are available in electronic form and only through limited subscription services.
- **Turnitin.com** is a tool to improve student research skills that also detect plagiarism. Turnitin.com provides resources on developing topics and assignments that encourage and guide students in producing papers that are intellectually honest, original in thought, and clear in expression. This tool helps ensure a culture of adherence to the University's standards for intellectual honesty. Turnitin.com also reviews students' papers for matches with Internet materials and with thousands of student papers in its database, and returns an Originality Report to instructors and/or students.
- **Smarthinking:** Students have access to 10 free hours of tutoring service per year through <u>Smarthinking</u>. Tutoring is available in the following subjects: math (basic math through advanced calculus), science (biology, chemistry, and physics), accounting, statistics, economics, Spanish, writing, grammar, and more. Additional information is located in the Online Research Center. From the ORC home page, click on either the "Writing Center" or "Tutoring Center" and then click "Smarthinking." All login information is available.

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### Webliography

Computer Crime and Intellectual Property Section U.S. DOJ <u>http://www.justice.gov/criminal/cybercrime/</u>

Cybercrime Law <u>http://www.cybercrimelaw.org/</u>

Cyber Criminals Most Wanted: The First Stop Cybercrime Awareness, Prevention & Safety Website <a href="http://www.ccmostwanted.com/">http://www.ccmostwanted.com/</a>

Department of Defense: Cybercrime Center <u>http://www.dc3.mil/home.php</u>

Federal Bureau of Investigation: Cyber Investigations http://www.fbi.gov/cyberinvest/cyberhome.htm

### Appendix A – Grading Rubric

All written assignments will be assessed according to this rubric. Note that a score of 0 may be assigned in any category where your work does not meet the criteria for the beginning level.

APUS Assignment Rubric Graduate Level 600+	EXEMPLARY LEVEL 4	ACCOMPLISHED LEVEL 3	DEVELOPING LEVEL 2	BEGINNNIG LEVEL 1	
FOCUS/THESIS	Student exhibits a defined and clear understanding of the assignment. Thesis is clearly defined and well constructed to help guide the reader throughout the assignment. Student builds upon the thesis of the assignment with well- documented and exceptional supporting facts, figures, and/or statements.	Establishes a good comprehension of topic and in the building of the thesis. Student demonstrates an effective presentation of thesis, with most support statements helping to support the key focus of assignment.	Student exhibits a basic understanding of the intended assignment, but the thesis is not fully supported throughout the assignment. While thesis helps to guide the development of the assignment, the reader may have some difficulty in seeing linkages between thoughts. While student has included a few supporting facts and statements, this has limited the quality of the assignment.	Exhibits a limited understanding of the assignment. Reader is unable to follow the logic used for the thesis and development of key themes. Introduction of thesis is not clearly evident, and reader must look deeper to discover the focus of the writer. Student's writing is weak in the inclusion of supporting facts or statements.	10
CONTENT/SUBJECT KNOWLEDGE	Student demonstrates proficient command of the subject matter in the assignment. Assignment shows an impressive level of depth of student's ability to relate course content to practical examples and applications. Student provides comprehensive analysis of details, facts, and concepts in a logical sequence.	Student exhibits above average usage of subject matter in assignment. Student provides above average ability in relating course content in examples given. Details and facts presented provide an adequate presentation of student's current level of subject matter knowledge.	The assignment reveals that the student has a general, fundamental understanding of the course material. Whereas, there are areas of some concerning in the linkages provided between facts and supporting statements. Student generally explains concepts, but only meets the minimum requirements in this area.	Student tries to explain some concepts, but overlooks critical details. Assignment appears vague or incomplete in various segments. Student presents concepts in isolation, and does not perceive to have a logical sequencing of ideas.	20

CRITICAL THINKING SKILLS	Student demonstrates a higher-level of critical thinking necessary for 300- 400 level work. Learner provides a strategic approach in presenting examples of problem solving or critical thinking, while drawing logical conclusions which are not immediately obvious. Student provides well-supported ideas and reflection with a variety of current and/or world views in the assignment. Student presents a genuine intellectual development of ideas throughout assignment.	Student exhibits a good command of critical thinking skills in the presentation of material and supporting statements. Assignment demonstrates the student's above average use of relating concepts by using a variety of factors. Overall, student provides adequate conclusions, with 2 or fewer errors.	Student takes a common, conventional approach in guiding the reader through various linkages and connections presented in assignment. However, student presents a limited perspective on key concepts throughout assignment. Student appears to have problems applying information in a problem- solving manner.	Student demonstrates beginning understanding of key concepts, but overlooks critical details. Learner is unable to apply information in a problem-solving fashion. Student presents confusing statements and facts in assignment. No evidence or little semblance of critical thinking skills.	20
ORGANIZATION OF IDEAS/FORMAT	Student thoroughly understands and excels in explaining all major points. An original, unique, and/or imaginative approach to overall ideas, concepts, and findings is presented. Overall format of assignment includes an appropriate introduction (or abstract), well- developed paragraphs, and conclusion. Finished assignment demonstrates student's ability to plan and organize research in a logical sequence. Student uses at least of 5-7 references in assignment.	Student explains the majority of points and concepts in the assignment. Learner demonstrates a good skill level in formatting and organizing material in assignment. Student presents an above average level of preparedness, with a few formatting errors. Assignment contains less than 5 resources.	Learner applies some points and concepts incorrectly. Student uses a variety of formatting styles, with some inconsistencies throughout the paper. Assignment does not have a continuous pattern of logical sequencing. Student uses less than 3 sources or references.	Assignment reveals formatting errors and a lack of organization. Student presents an incomplete attempt to provide linkages or explanation of key terms. The lack of appropriate references or source materials demonstrates the student's need for additional help or training in this area. Student needs to review and revise the assignment.	20

WDITING	Ctudent demonstrates ==	Ctudent provides on	Accievant vollecto hacia	Tanica concenta and	20
WRITING	Student demonstrates an	Student provides an	Assignment reflects basic	Topics, concepts, and	20
CONVENTIONS	excellent command of	effective display of good	writing and grammar, but	ideas are not	
(GRAMMAR &	grammar, as well as	writing and grammar.	more than 5 errors. Key	coherently discussed or	
MECHANICS)	presents research in a clear	Assignment reflects	terms and concepts are	expressed in	
	and concise writing style.	student's ability to select	somewhat vague and not	assignments. Student's	
	Presents a thorough,	appropriate word usage	completely explained by	writing style is weak	
	extensive understanding of	and present an above	student. Student uses a	and needs	
	word usage. Student excels	average presentation of a	basic vocabulary in	improvement, along	
	in the selection and	given topic or issue.	assignment. Student's writing	with numerous	
	development of a well-	Assignment appears to	ability is average, but	proofreading errors.	
	planned research	be well written with no	demonstrates a basic	Assignment lacks	
	assignment. Assignment is	more than 3-5 errors.	understanding of the subject	clarity, consistency, and	
	error-free and reflects	Student provides a final	matter.	correctness. Student	
	student's ability to prepare a	written product that		needs to review and	
	high-quality academic	covers the above-minimal		revise assignment.	
	assignment.	requirements.		5	
USE OF COMPUTER	Student provides a high-	Assignment presents an	Student demonstrates a basic	Student needs to	10
TECHNOLOGY/	caliber, formatted	above-average use of	knowledge of computer	develop better	
APPLICATIONS	assignment. Learner exhibits	formatting skills, with less	applications. Appearance of	formatting skills. The	
	excellent use of computer	than 3 errors. Students	final assignment	student may need to	
	technology in the	has a good command of	demonstrates the student's	take additional training	
	development of assignment.	computer applications to	limited ability to format and	or obtain help from the	
	Quality and appropriateness	format information and/or	present data. Resources	Educator Help Desk	
	of stated references	figures in an appropriate	used in assignment are	while preparing an	
	demonstrate the student's	format. Student uses at	limited. Student may need to	assignment. Research	
	ability to use technology to	least two types of	obtain further help in the use	and resources	
	conduct applicable research.	computer applications to	of computer applications and	presented in the	
	Given assignment includes	produce a quality	Internet research.	assignment are limited.	
	appropriate word	assignment.		Student needs to	
	processing, spreadsheet			expand research	
	and/or other computer			scope. The number of	
	applications as part of the			formatting errors is not	
TOTAL DOINTS	final product.			acceptable.	100
TOTAL POINTS					100