

FLORIDA STATE COLLEGE AT JACKSONVILLE

COLLEGE CREDIT COURSE OUTLINE

COURSE NUMBER: CAP 2140

COURSE TITLE: Data Forensics I

PREREQUISITE(S): CTS 2655 and CNT 2102

COREQUISITE(S): None

CREDIT HOURS: 4

CONTACT HOURS/WEEK: 4

CONTACT HOUR BREAKDOWN:

 Lecture Discussion: 3

 Laboratory: 1

 Other _____:

FACULTY WORKLOAD POINTS: 4

STANDARDIZED CLASS SIZE

ALLOCATION: 20

COURSE DESCRIPTION:

This course provides information on identifying inappropriate uses of corporate IT, gathering electronic evidence of wrongdoing, securing corporate systems from further misuse, and protecting electronic evidence from intentional or accidental modification. Hands-on exercises are an integral part of the course.

SUGGESTED TEXT(S): Guide to Computer Forensics and Investigations;
Publisher: Thompson (Current edition)

IMPLEMENTATION DATE: Spring Term, 2003 (20032)

REVIEW OR MODIFICATION DATE: Spring Term, 2007 (20072)

COURSE TOPICS	CONTACT HOURS <u>PER TOPIC</u>
I. forensics and how to prepare for and conduct a computer investigation.	Basic computer 8
II. Installation of computer forensics workstations and software.	8
III. Techniques in digital evidence acquisition.	8
IV Conduct an investigation on evidence media that has had its contents obfuscated to avoid detection. The evidence files will be altered and unreadable by normal means.	8
V. Low-level file reconstruction.	8
VI. Basics of a corporate investigation.	6
VII. Basics of being an expert witness in a criminal case involving forensics.	6
VII. Hands-on testing	4
VIII. Written Testing	4
	60

PROGRAM TITLE: Networking Services Technology

COURSE TITLE: Data Forensics I

CIP NUMBER: 0507.030401 (AAS)

LIST PERFORMANCE STANDARDS ADDRESSED:

NUMBER(S): TITLES(S):

01.0 Demonstrate understanding of networked environments - The student will be able to:

- 01.01 Explain the use of binary numbers to represent instructions and data.
- 01.02 Describe the hardware implications of the use of binary representation of instructions and data.
- 01.03 Convert numbers among decimal, binary, and hexadecimal representation.
- 01.04 Perform binary arithmetic.
- 01.05 Identify various coding schemes (ASCII, etc.).
- 01.09 Identify and discuss issues (such as security, privacy, redundancy, etc.) related to networked environments.
- 01.10 Identify and discuss issues related to naming conventions for user ids, email, passwords, and network devices.

04.0 Understand, install and configure computer software - The student will be able to:

- 04.01 Describe the functions and major components (BIOS, task management, etc.) of a computer operating system.
- 04.02 Identify current operating systems and describe their important features.
- 04.04 Identify current systems utilities and describe their functions.
- 04.05 Use system software to perform routine maintenance tasks such as backup, hard drive defragmentation, etc.
- 04.10 Use basic features of office productivity software.
- 04.12 Use software produced by multiple vendors.

08.0 Perform Network administration and management activities - The student will be able to:

- 08.02 Establish, document and disseminate user security guidelines.
- 08.08 Perform network monitoring activities to ensure account integrity.
- 08.11 Document security policies and violations.
- 08.12 Install and update anti-virus software.
- 08.15 Address security issues raised by the ability to access server remotely.

12.0 Demonstrate professional development skills - The student will be able to understand the importance of:

- 12.01 Attending classes, seminars, and workshops.
- 12.02 Reviewing literature and reading current literature.
- 12.03 Evaluating skills and taking necessary steps to upgrade.



NOTE: Use either the Tab key or mouse click to move from field to field. The box will expand to accommodate your entry.

Section 1	
COURSE PREFIX AND NUMBER: CAP 2140	SEMESTER CREDIT HOURS: 4
COURSE TITLE: Data Forensics I	

Section 2

TYPE OF COURSE: (Click on the box to check all that apply)

<input type="checkbox"/> AA Elective	<input type="checkbox"/> AS Required Professional Course	<input type="checkbox"/> College Prep
<input checked="" type="checkbox"/> AAS Professional Elective	<input type="checkbox"/> AAS Required Professional Course	<input type="checkbox"/> Technical Certificate
<input type="checkbox"/> Other _____		
<input type="checkbox"/> General Education: (For General Education courses, you must also complete Section 3 and Section 7)		

Section 3 (If applicable)

INDICATE BELOW THE DISCIPLINE AREA FOR GENERAL EDUCATION COURSES:

<input type="checkbox"/> Communication	<input type="checkbox"/> Social & Behavioral Sciences	<input type="checkbox"/> Mathematics
<input type="checkbox"/> Natural Sciences	<input type="checkbox"/> Humanities	

Section 4

INTELLECTUAL COMPETENCIES:

<input checked="" type="checkbox"/> Reading	<input checked="" type="checkbox"/> Speaking	<input checked="" type="checkbox"/> Critical Analysis	<input checked="" type="checkbox"/> Quantitative Skills	<input type="checkbox"/> Scientific Method of Inquiry
<input checked="" type="checkbox"/> Writing	<input checked="" type="checkbox"/> Listening	<input type="checkbox"/> Information Literacy	<input type="checkbox"/> Ethical Judgment	<input checked="" type="checkbox"/> Working Collaboratively

Section 5		
LEARNING OUTCOMES		METHOD OF ASSESSMENT
•	The student will understand basic computer forensics and how to prepare for and conduct a computer investigation.	The classroom environment will include a mock crime scene. The student must investigate the scene in a professional manner consistent with proper evidence gathering techniques.
•	The student will become proficient in the installation of computer forensics workstations and software.	Each student will install, test, and configure computer forensic software including Forensic Toolkit, Encase, Digital Intelligence DriveSpy and Imager.
•	The student will learn state of the art techniques in digital evidence acquisition.	Each student will perform data acquisition techniques on a variety of storage devices including hard drives, USB drives, PDSs and Cell phones. The digital fingerprint of the particular device will be compared to the student's results for verification of accuracy.

Section 5 (Continued)

<ul style="list-style-type: none">•	The student will conduct an investigation on evidence media that has had its contents obfuscated to avoid detection. The evidence files will be altered and unreadable by normal means.	Each student will reconstruct the Directory structure of a File Allocation Table (FAT), manually recover erased and corrupted files, and rebuild file headers and extensions as needed.
<ul style="list-style-type: none">•	The student will become proficient with low-level file reconstruction.	The student will be trained in the use of Hex tools and required to reconstruct file headers and trailers to their proper values.
<ul style="list-style-type: none">•	Students will be taught the basics of a corporate investigation.	Students will be assigned to one of three teams. Each team will analyze a corporate policy violation scenario and create recommendations and supporting report documents.
<ul style="list-style-type: none">•	The student will learn the basics of being an expert witness in a criminal case involving forensics.	Students will hold a mock trial submitting the evidence gathered from the corporate policy violation. Each student will act as an expert witness and be judged on his or her professionalism.

Section 6

Name of Person Completing This Form: Ernie Friend