

Dixie State College
St. George, Utah
CJ 4780 Digital Forensics Capstone
Spring 2014 (January 6th - May 2nd)

Class Details

Credit Hours: 3.00
Location: Unv Plaza D RM 201

Class Hours: MWF 10:00 - 10:50
Prerequisite: Instructor Permission

Instructor

Gary Cantrell
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Office: University Plaza D Upstairs
Office Hours: MTWR 10:00 - 12:00,
(or by appointment)

Course Description

Capstone course for students seeking the digital forensics emphasis in the bachelor's degree in Criminal Justice with an emphasis in Digital Forensics or the Certificate of Completion in Computer Forensics. Involves a semester-long project overseen by a member of the faculty.

There are no additional fees for this course, and this course does not hold GE status.

Course Materials

Various articles and white papers as chosen by the student and approved by the instructor.

Program Goals

The Criminal Justice Program helps students who are seeking a career in law/law enforcement develop the skills and motivation necessary to succeed in a career in law enforcement. Students seeking a degree(s) in Criminal Justice/Integrated Studies will receive an education in the following areas, which include, but are not limited to the following: how to examine procedural requirements for the judicial processing of criminal offenders; rights of the accused; general court procedures, trial preparation; laws of evidence; crime scene investigation; corrections; juvenile delinquency/justice; ethical decision making; how to develop writing/problem solving skills through oral argument and writing; how to develop critical thinking skills; and a general understanding of constitutional law.

Disclosure - (VERY IMPORTANT)

This course attempts to model the real world as closely as possible. In so doing, we often use real data sets obtained from cell phones, hard drives, and other digital devices. These data sets are typically obtained through donations or online through sites like EBay or Shop Goodwill. We use these datasets either by themselves or as a base for creating training sets.

Since these data sets are obtained from “the wild,” it is extremely likely they will contain explicit adult content in the form of adult pornographic materials, and explicit language. We do not have any desire to expose our students to such materials. Therefore, we attempt to perform some filtering, but it is impossible to completely eliminate all offensive material without destroying its real world aspect.

If you are not willing to view such material, we advise you not to take this course. This is a digital forensics course, and outside academics you will be repeatedly exposed to such materials.

Course Objectives

Objectives are for student to demonstrate their mastery of digital forensics at the appropriate level of someone who has completed the certificate of completion or program emphasis. Student must demonstrate they can successfully complete a project of their own design and interest, and report the results in a clear professional manner.

Submissables

Contract:

Student will present a contract within the first three weeks of the course. This contract will describe in detail the project to be carried out by the student. A project can consist of research, real case evaluation, real case re-evaluation, coding or scripting, or any other project approved by the instructor. A contract is not valid until signed by both the student and the instructor. If complications occur during the semester, a contract can be resubmitted, but may be refused. Contract details will be discussed in class.

On completion of the course instructor will compare the results of what was done with what was agreed on in the contract.

Final Paper:

Student will be required to turn a paper at the end of the semester in the form of a project report, white paper, or research paper. There will be milestones throughout the semester requiring the student to submit sections of this work. Failing to meet these milestones will effect the final grade. The format of this paper will be discussed in further detail in class.

Grading Scheme

| | | | |
|------------------------|---------|---------------|--------------|
| Contract (Required) | 20 pts | <u>Points</u> | <u>Grade</u> |
| Intro, Res, Lit Review | 15 pts | 372 >= | A |
| Methods | 15 pts | 360 – 371 | A - |
| One-on-one Eval | 20 pts | 344 – 359 | B+ |
| Intermediate Results | 30 pts | 332 – 343 | B |
| Final Report | 300 pts | 320 – 331 | B- |
| | | 303 – 319 | C+ |
| | | 292 – 302 | C |
| | | 280 – 291 | C- |
| | | < 240 | F |

Final Report grading will be as following (additional points can be deducted for grammar and general quality):

| | |
|-----|--|
| 300 | student far exceeded the instructor's expectations and contract parameters |
| 280 | student exceeded the instructor's expectations and contract parameters |
| 260 | student met 100% of the requirements of his/her contract |
| 240 | student met 90% of the requirements of his/her contract |
| 220 | student met 80% of the requirements of his/her contract |
| 200 | student met 75% of the requirements of his/her contract |
| 180 | student met 70% of the requirements of his/her contract |
| 0 | student met less than 70% of the requirements of his/her contract |

Note: a requirement is not fully met until it is well and clearly documented

Note: 10% point deduction per work day for late submissions

Other Useful Information:

College approved absences: Dixie College Policy explains in detail what needs to happen if you anticipate being absent from class because of a college-sponsored activity (athletic events, club activities, field trips for other classes, etc). Please read this information and follow the instructions carefully! The policy can be found at: <http://www.dixie.edu/humanres/policy/sec5/523.html>

Dmail: Important class and college information will be sent to your Dmail account. This information includes your DSC bill, financial aid/scholarship notices, notification of dropped classes, reminders of important dates and events, and other information critical to your success in this class and at DSC. All DSC students are automatically assigned a Dmail account. If you don't know your user name and password, go to www.dixie.edu and select "Dmail," for complete instructions. You will be held responsible for information sent to your Dmail email, so please check it often.

Disability Accommodations: Students with medical, psychological, learning or other disabilities desiring reasonable academic adjustment, accommodations, or auxiliary aids to be successful in this class will need to contact the DISABILITY RESOURCE CENTER Coordinator (Baako Wahabu) for eligibility determination. Proper documentation of impairment is required in order to receive services or accommodations. DRC is located in the North Plaza Building. Visit or call 652-7516 to schedule appointment to discuss the process. DRC Coordinator determines eligibility for and authorizes the provision of services.

College resources: Several college resources are available to help you succeed. Check out the links for each one to get more information.

If you need help understanding the content of your courses, go to the Tutoring Center located on the 4th floor of the Holland Centennial Commons in Room 431. You can visit them online at <http://dsc.dixie.edu/tutoring/>

If you need help writing papers, go to the Writing Center on the fourth floor of the Holland Centennial Commons in room 421. You can also visit them online at http://new.dixie.edu/english/dsc_writing_center.php

If you need to use a computer to do schoolwork on campus, go to the Smith Computer Center or in the Dixie College library on the second, mezzanine, or third floors of the HCC.

If you are assigned to take a test in the Testing Center, go to the North Plaza. You can get information on their website at <http://new.dixie.edu/testing/>

The Library has all kinds of information and resources. Visit the Dixie State College Library on the 2nd, and 3rd floors of the Holland Centennial Commons, or go to the library website at <http://library.dixie.edu/>

Classroom expectations: It is the responsibility of an instructor to manage the classroom environment to ensure a good learning climate for all students. This means not talking when the teacher is talking, following instructions, and speaking and acting respectfully to the professor and fellow students. If your behavior is disruptive, I will first let you know verbally that you are behaving inappropriately. If it continues, I will send you written notice that your behavior must change. As a last resort, I will drop you from the class. For more details, please see the disruptive behavior policy at: <http://www.dixie.edu/humanres/policy/sec3/334.html>

Academic integrity: I believe that most students are honest, and I don't want to punish everyone for the few that aren't. However, I will not tolerate cheating, and if I discover that it has occurred, a zero grade will be given for that assignment or exam, and you will not be allowed to make it up. Repeated or aggravated offenses will result in failing the course. Any time you take credit for work you did not do, you are cheating. This includes getting the answers to homework problems from someone else, copying information

from a library or internet source and presenting it as if it were your own words (plagiarism), looking at someone else's answers on an exam, and asking someone who has already taken a test about what questions it contains. I have tried to design assignments and exams to minimize the temptation to cheat, but it is not my job to prevent you from cheating. If you cheat and are not caught, it doesn't mean that you "beat the system." It means you violated the Student Code and forfeited your integrity, whether or not you are caught. You will pay the price, sooner or later. (See "Student Code" <http://www.dixie.edu/humanres/policy/sec5/533.html#appeals>).

Course Outline:

| Week of | Topic |
|------------------|---|
| Jan 6, 8, 10 | Syllabus Review and Contract Discussion |
| Jan 13, 15, 17 | Project Descriptions and Help |
| Jan 22, 24 | Contract Draft 1 Due |
| Jan 27, 29, 31 | Final Contract Due |
| Feb 3, 5, 7 | Lab Work |
| Feb 10, 13, 14 | Introduction, Research Questions, and Literary review |
| Feb 19, 21 | Methods Due |
| Feb 24, 25, 27 | One-on-one Progress Evaluation |
| Mar 3, 5, 7 | Lab Work |
| Mar 10-14 | Spring Break |
| Mar 17, 19, 21 | Lab Work |
| Mar 24, 26, 28 | Lab Work |
| Mar 31, Apr 2, 4 | Intermediate results due |
| Apr 7, 9, 11 | Lab Work |
| Apr 14, 16, 18 | Report Draft 1 Due |
| Apr 21, 23 | Final Report Due |