

Course Syllabus

Course Information

Course COMP3731: Computer Forensics (Winter 2019)

Location ~~Boettcher Center Auditorium 102~~ ECS 400

Time TR 5:00 - 6:50 PM

Instructor [Rinku Dewri \(http://cs.du.edu/~rdewri\)](http://cs.du.edu/~rdewri) (rdewri@cs.du.edu)

Office Hours ECS 369, TW 2:00 PM - 3:30 PM

GTA Bobby Acha (bobby@du.edu)

GTA Office Hours TBA

Description

Computer Forensics involves the examination of information contained in digital media with the aim of recovering and analyzing latent evidence. This course will provide an understanding of the basic concepts in preservation, identification, extraction and validation of forensic evidence in a computer system. The course covers many systems level concepts such as disk partitions, file systems, system artifacts in multiple operating systems, file formats, email transfers, and network layers, among others. Students work extensively on raw images of memory and disks, and in the process, build components commonly seen as features of commercial forensics tools (e.g. file system carver, memory analyzer, file carver, and steganalysis).

Course Objectives

- Understand a basic computer forensics investigation process, including evidence acquisition, analysis and reporting.
- Demonstrate working knowledge of disk structures and file systems in multiple operating systems.
- Demonstrate knowledge of valuable forensics artifacts in modern operating systems and applications.
- Understand common file formats and methods to extract files from raw disk images.
- Familiarity with other forensics domains such as email forensics and network forensics.

Prerequisites

COMP2355 or permission of instructor. Programming assignments will be in C/C++.

Referred Text

This class will cover multiple topics that are often hard to find in one single book. Attendance in class is strongly advised. Multiple books and online documentation has been used to create the content. Hence there is no one textbook for the course. The following is the most heavily referred book for the course, in case you are interested in buying one.


1. **Guide to Computer Forensics and Investigations**, B. Nelson, A. Phillips and C. Steuart, Course Technology; 5th Edition, ISBN: 978-1285060033

References and slides will be shared for each lecture (see [Modules](#)).

Schedule

Important dates related to registration are available in the [Registrar's website](#) (<http://www.du.edu/registrar/calendar/>). View the [Modules](#) for a list of specific topics to be covered on a specific date; the list may change as the course progresses over the quarter.

Grading

The points distribution is on the right side of this page. Final letter grades will be decided based on the performance of the class. The grade scaling procedure is detailed [here](#) . It is imperative that you show sufficient engagement in all components of this course (classroom, assignments, quizzes and exams) for the grade scaling procedure to be applied to your score.

Assignment Policy

Assignments may be submitted late up to 24 hours past the deadline for a penalty of 10% of the points received. No submission will be accepted thereafter. If you have an issue with the grade on an assignment, make sure that you discuss it with the GTA (or with me if necessary) **within a week** of when the grade for the assignment is posted. No changes will be made thereafter.

Discussions regarding an assignment are permitted, but when it comes to putting down the final solution on paper or code, you **must** work alone unless stated otherwise.

Computer Science Laptop Requirements

The course assumes that every student has a laptop/workstation compliant with the Computer Science department's [minimum laptop requirement](#) (<http://support.cs.du.edu/computer-science-laptop-requirements/>). Bring your laptop to every class as there will be in class exercises requiring its use.

Tolerance Policy

You are expected to be tolerant of all people, regardless of race, color, national origin, age, religion, disability, sexual orientation, gender identity, gender expression, marital status, parental status, emotional or mental status, genetic information, or veteran status. Comments and/or slang that target any of these groups is completely unacceptable in my class or in the University. Please think about what you're saying before you say it and learn to be tolerant of all people.

Disabilities/Medical Issues

If you qualify for academic accommodations because of a disability or medical issue, please submit a Faculty Letter to me from Disability Services Program (DSP) in a timely manner so that your needs may be addressed. DSP is located on the 4th floor of Ruffatto Hall; 1999 E. Evans Ave. 303.871. / 2372 / 2278 / 7432. Information is also available on line at <http://www.du.edu/disability/dsp> (<http://www.du.edu/disability/dsp>); see the Handbook for Students with Disabilities.

Title IX

Gender violence can happen to anyone regardless of race, class, age, appearance, gender identity, or sexual orientation. The University of Denver is committed to providing an environment free of discrimination on the basis of sex (gender), including sexual misconduct, sexual assault, relationship violence, and stalking. [The Center for Advocacy, Prevention and Empowerment \(CAPE\)](http://www.du.edu/health-and-counseling-center/cape/index.html) (<http://www.du.edu/health-and-counseling-center/cape/index.html>) provides programs and resources to help promote healthy relationships, teach non-violence and equality, and foster a respectful and safe environment for all members of the University of Denver community. All services are confidential and free of charge.

For assistance during business hours, call 303-871-3853 and ask to speak to the Director of CAPE. After hours, please call the Emergency & Crisis Dispatch Line at 303-871-3000 and ask to speak to the CAPE advocate on call.

Religious Accommodations Policy

University policy grants students excused absences from class or other organized activities or observance of religious holy days, unless the accommodation would create an undue hardship. You must **notify me by the end of the first week of classes** if you have any conflicts that may require an absence. It is your responsibility to make arrangements with me in advance to make up any missed work or in-class material.

Student Athletes

If you are a student-athlete, you should inform me of any class days to be missed due to DU sponsored varsity athletic events in which you are participating. Please **provide me with an absence policy form by the end of the first week of class**. You will need to make up any missed lectures, assignments, and/or exams.

Use of Technology in the Classroom

Access to the Internet can be a valuable aid to the classroom learning environment. You may be encouraged to use a laptop, smart phone, or other device to explore concepts related to course discussions and in-class activity. Keep in mind, however, that these technologies can be distracting – not only for you, but to others in the class. Please avoid the temptation of Facebook, texting, or other off-topic diversions.

Honor Code/Academic Integrity

All work submitted in this course must be your own and produced exclusively for this course. The use of sources (ideas, quotations, paraphrases) must be properly acknowledged and documented. For the consequences of violating the Academic Misconduct policy, refer to the University of Denver website on the Honor Code (www.du.edu/honorcode (<http://www.du.edu/honorcode>)). See also <http://www.du.edu/studentconduct> (<http://www.du.edu/studentconduct>) for general information about conduct expectations from the Office of Student Conduct.



Extra Credits














Work hard during the quarter instead of requesting for more work towards the end. There will be no extra credits for the course.

Important Dates

Please see the [Registrar's website](http://www.du.edu/registrar/calendar/) (<http://www.du.edu/registrar/calendar/>). It is your responsibility to stay on track with these dates.

Course Summary:

Date	Details	
Fri Jan 18, 2019	 Quiz 1 (https://canvas.du.edu/courses/87331/assignments/525537)	due by 11:59pm
Tue Jan 22, 2019	 ASG1 (https://canvas.du.edu/courses/87331/assignments/525542)	due by 11:59pm

Date	Details	
Fri Jan 25, 2019	 Quiz 2 (https://canvas.du.edu/courses/87331/assignments/525541)	due by 11:59pm
Tue Jan 29, 2019	 ASG2 (https://canvas.du.edu/courses/87331/assignments/525543)	due by 11:59pm
Fri Feb 1, 2019	 Quiz 3 (https://canvas.du.edu/courses/87331/assignments/525540)	due by 11:59pm
Thu Feb 7, 2019	 Midterm (https://canvas.du.edu/courses/87331/assignments/525549)	due by 11:59pm
Tue Feb 12, 2019	 ASG3 (https://canvas.du.edu/courses/87331/assignments/525544)	due by 11:59pm
Fri Feb 15, 2019	 Quiz 4 (https://canvas.du.edu/courses/87331/assignments/525539)	due by 11:59pm
Fri Feb 22, 2019	 Quiz 5 (https://canvas.du.edu/courses/87331/assignments/525538)	due by 11:59pm
	 ASG4 (https://canvas.du.edu/courses/87331/assignments/525545)	due by 11:59pm
Fri Mar 1, 2019	 Quiz 6 (https://canvas.du.edu/courses/87331/assignments/525726)	due by 11:59pm
Tue Mar 5, 2019	 ASG5 (https://canvas.du.edu/courses/87331/assignments/525546)	due by 11:59pm
Fri Mar 8, 2019	 Quiz 7 (https://canvas.du.edu/courses/87331/assignments/525727)	due by 11:59pm
Fri Mar 15, 2019	 ASG6 (https://canvas.du.edu/courses/87331/assignments/525547)	due by 11:59pm
Tue Mar 19, 2019	 Final (https://canvas.du.edu/courses/87331/assignments/525548)	due by 11:59pm

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