



SYLLABUS  
COLLEGE OF COMPUTING AND SOFTWARE ENGINEERING  
DEPARTMENT OF INFORMATION TECHNOLOGY  
PREFIX IT-6853: COMPUTER FORENSICS  
FALL 2020

## Course Information

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Class meeting time: *Online*  
Modality and Location: *Online 100%*  
*Syllabus is posted in D2L*

## Instructor

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**Name:** Dr. Maria Valero  
**E-mail:** [mvalero2@kennesaw.edu](mailto:mvalero2@kennesaw.edu)  
**Office Location:** Atrium J-312  
**Office Phone:** (470) 578-7638  
**Office Hours:** Mon 4:00pm – 5:30 pm (In office) or by appointment  
Tues and Thurs 11 am – 12 pm (online) or by appointment

### Course Communication:

- Email is the best way to reach the instructor. Please email me directly from your KSU email address. (e.g. [yourlogin@students.kennesaw.edu](mailto:yourlogin@students.kennesaw.edu));
- Instructor's KSU email ([mvalero2@kennesaw.edu](mailto:mvalero2@kennesaw.edu))
- Use D2L Discussion Forums and D2L Chat to interact with your classmates
- Students' emails will be replied WITHIN 24 hours during the weekday. Weekend and holidays don't apply.
- When email the instructor, put the course number (IT-6853) in the subject line. Emails without proper subject line will not be replied.
- Avoid using personal email. Sensitive information (such as your grades) can ONLY be sent to D2L email or KSU email account.

## Course Description

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**Prerequisites/Corequisites:** --

**Credit Hours:** 3

**Required Texts:** None. The following books are optional

**Optional Texts:**

- Guide to Computer Forensics and Investigations (6th Edition)  
By Bill Nelson, Amelia Phillips, Christopher Stuart.

Cengage, Copyright 2018, ISBN-13: 978-1337568944, ISBN-10: 1337568945

- Digital Forensics with Open Source Tools  
By Cory Altheide and Harlan Carvery  
Elsevier, Copyright 2011, ISBN 978-1-59749-586-8

### **Course Description:**

This course studies techniques and tools in computing investigation, digital evidence collection, recovery, and analysis. Topics include: understanding the computer forensics profession; understanding different OS file systems; image recovery; network forensics; investigating logs and network traffic, recovery of passwords. The course will provide hands-on experience labs conducting a variety of forensics practices. These skills can help prepare trainees for a variety of IT positions, including: Computer Forensic Analyst, Digital Forensic Examiner, Digital Forensics Incident Response and Security Administrator.

### **Technology Requirements:**

- This class uses D2L as hosting site. Run a system check to ensure your computer work with D2L. Check out UITS D2L training: <http://uits.kennesaw.edu/support/d2ltraining.php> .
- Internet Connection. A high-speed Internet connection such as DSL or cable Internet access is highly recommended. You may also use computer labs on campus to complete the coursework.
- This class uses NetLab provided by KSU to do the labs. Please check D2L for further instructions.
- A web camera is required for a student to take final exam.

### **Student Learning Outcomes**

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By the end of this course, a student should be able to:

- Describe the role of computer forensics professionals.
- Analyze hard disks and File System in Window and Linux OS.
- Perform data carving and steganography.
- Evaluate digital forensics tools for web browser, network, and email forensics.
- Recover passwords, analyze log data files, and create professional forensic reports

### **Course Requirements and Assignment**

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- All assignments will be posted on D2L: <https://kennesaw.view.usg.edu>
- All assignments must be submitted through D2L by the deadline;
- The labs will be done using NetLab (Instructions provided separate)
- Please double-check your submission; whatever you submit by deadline will be graded;

# Evaluation and Grading Policies

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## Weight Distribution

Grading Item	Weight
Labs (9)	45%
Quizzes (3)	15%
Research paper	15%
Mid-term exam	10%
Final Exam	15%
<b>Total</b>	<b>100%</b>

### Grading Scale:

90% - 100% A

80% - 89% B

70% - 79% C

60% - 69% D

0% - 59% E

Grades will be rounded up if they are  $>$  or  $= .5$  or above, for example, an 89.6 is an A, but 79.2 is a C.

## Course Policies

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### Course Attendance Policy

- Online course 100%

### Grading Items Turnaround Time

- The grades for the quizzes and exams will be available 96 business hours after the due date
- The grades for labs/assignments/projects will be available in less than 1 week after the due date

**Assignments & Exam Policy** *[Below are recommended policies, feel free to make adjustments as needed]*

- All assignments **MUST** be submitted through D2L (<https://kennesaw.view.usg.edu/>) course website by the deadline specified in course calendar. Email submission will **NOT** be accepted. Any assignment that is less or equal than 24 hours late is subject to 10% penalty. Any assignment that is less or equal than 48 hours late is subject to 20% penalty. Any assignment that is more than 48 hours late will **NOT** be accepted.
- All quizzes and exams **MUST** be completed on D2L website by the deadline specified in course calendar. The quizzes exams can't be opened/submitted after the deadline.
- If you must miss an exam due to illness, you must e-mail or call the instructor before the scheduled time. Failure to notify the instructor prior to the scheduled time will produce an

automatic zero for the exam. NO makeup test except for emergencies with proof (e.g. doctor's slip).

### Final Exam

- Respondus Lockdown Browser + Web Camera will be used for the final exam.
- LockedDown Web Browser Student Guide: [https://apps.kennesaw.edu/files/pr\\_app\\_uni\\_cdoc/doc/D2L\\_Brightspace\\_Quizzes\\_LockDown\\_Browser\\_Dashboard\\_Faculty\\_Guide.pdf](https://apps.kennesaw.edu/files/pr_app_uni_cdoc/doc/D2L_Brightspace_Quizzes_LockDown_Browser_Dashboard_Faculty_Guide.pdf)
- Please contact the instructor if you have any questions.

### Student Responsibility

For this class, you are expected to spend seven to eight hours each week on coursework:

- Check KSU email regularly;
- Login D2L course website frequently to access the course material (at least every other day);
- Follow the weekly study guide in the learning module;
- Study the assigned material such as virtual lectures, textbook chapters and the PowerPoint slides;
- Complete assigned quiz/assignment/discussion/project on time.
- On every Monday, you will be provided with the following materials:
  - An overview of our contents, materials, and goals for this week (this is where you start from: all homework, quizzes, assignments will also be announced in this study guide);
  - Assigned reading from textbooks and/or provided material;
  - PowerPoint slides;
  - Homework assignments, or lab, or quiz;
  - A brief video lecture to walk you through the PPT slides;
- During each week, you should:
  - Read the assigned sections of the textbook and/or provided materials;
  - Digest the PowerPoint slides;
  - Take online quiz if assigned;
  - Finish homework assignments and submit it on time;

### Tips for Effective Online Learning

For an online class, students can really enjoy the benefits of learning at your own pace and at the place of your choice. Below are some tips for effective online learning.

- *Check D2L course website frequently.* It's recommended that students should login D2L course site **AT LEAST** every other day. Always be aware of current status of the course. Take advantage of the posted learning material such as recorded lectures.
- *Work with the instructor closely.* If you have any question, contact the instructor immediately. You can either email or text me and your message is guaranteed to be replied within 24 hours.
- *Start your work early.* If you can start a task early, don't start late. Assuming you spend the same amount of time completing the task, starting later will be much more stressful than starting early. Never start until the last minute! You'll have no turnaround time if you need help or something happens.
- *Keep up with the work.* Don't fall behind. If you do, contact the instructor immediately for what you need to do. The instructor may also contact you if he is concerned. Respond to the instructor's inquiry promptly.

## Class Communication Rules

In any classroom setting there are communication rules in place that encourage students to respect others and their opinions. In an online environment, the do's and don'ts of online communication are referred to as **Netiquette**. As a student in my course you should:

- Be sensitive and reflective to what others are saying.
- **Avoid typing in all capitals** because it is difficult to read and is considered the electronic version of 'shouting'.
- Don't flame - These are outbursts of extreme emotion or opinion.
- Think before you hit the post (enter/reply) button. You can't take it back! Don't use offensive language.
- Use clear subject lines.
- Don't use abbreviations or acronyms unless the entire class knows them. Be forgiving. Anyone can make a mistake.
- Keep the dialog collegial and professional, humor is difficult to convey in an online environment.
- Always **assume good intent** and **respond accordingly**. If you are unsure of or annoyed by a message, wait 24 hours before responding.

## Course Schedule

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The course schedule is tentative and is subject to change. Please use D2L course calendar as accurate due dates.

Weeks	Date	Topic	Assignment
Week 1	Aug17-Aug23	Mod 1: Introduction to Computer Forensics	Lab A (Lab 6 NetLab)
Week 2	Aug24-Aug30	Mod 2: Windows File Systems and Artifacts	Lab B (Lab 1 NetLab)
Week 3	Aug31-Sep06	Mod 3: Linux File Systems and Artifacts	Lab C (Lab 2 NetLab)
Week 4	Sep7-Sep13	Mod 4: Introduction to Partitions	Quiz #1
Week 5	Sep14-Sep20	Mod 5: Data Acquisition	Lab D (Lab 4 NetLab)
Week 6	Sep21-Sep27	Mod 6: Registry Forensics	Research paper topic selection Quiz#2
Week 7	Sep28-Oct4	Mod 7: Web Browser Forensics	MidTerm
Week 8	Oct5-Oct11	Mod 8: Network Forensics	Lab E (Lab 10 NetLab)
Week 9	Oct12-Oct18	Mod 9: Automatic Forensic Analysis	Lab F (Lab 11 & 12 NetLab)
Week 10	Oct19-Oct25	Mod 10: Data Carving & Steganography	Lab G (Lab 15 NetLab)
Week 11	Oct26-Nov01	Mod 11: Email Forensics	Quiz #3
Week 12	Nov02-Nov08	Mod 12: Mobile Forensics	Lab H (Lab 16 & Lab 17 Netlab)
Week 13	Nov09-Nov15	Mod 13: Recovering passwords Mod 14: Log Analysis	Lab I (Lab 18 NetLab)
Week 14	Nov16-Nov22	Mod 15: Cloud Forensics	Draft of research paper
Week 15	Nov23-Nov29	FALL BREAK	
Week 16	Nov30-Dec6	Review	Final Exan Research paper due

## Important Dates:

Aug 17: First day of class

Sept 7: Labor holiday

October 7: Last day to withdraw without academic penalty

November 23-November 29: Fall break

Dec 7: Last day of class

## Institutional Policies

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- [Federal, BOR, & KSU Course Syllabus Policies](#)
- [Academic Integrity Statement](#)
  - Examples of violation of academic integrity: 1) copy from others or from Internet; 2) allow others to copy your work; 3) use other's help or help other in completing the quizzes or exams.
  - The first violation of academic integrity, the student will immediately receive 0 for the associated grading item. For the 2<sup>nd</sup> violation, the student will receive a fail grade for this course.

## KSU Statements on COVID-19

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### Face Masks in The Classroom

As mandated by the University System of Georgia, the university requires the use of face masks in the classroom and in KSU buildings to protect you, your classmates, and instructors. Per the University System of Georgia, anyone not using a face covering when required will be asked to wear one or must leave the area. Repeated refusal to comply with the requirement may result in discipline through the applicable conduct code.

Reasonable accommodations may be made for those who are unable to wear a face covering for documented health reasons. Please contact Student Disability Services at [sds@kennesaw.edu](mailto:sds@kennesaw.edu) for student accommodation requests.

### Shifting Modalities

Please note that the university reserves the right to shift teaching modalities at any time during the semester, if health and safety guidelines require it to do so. Some teaching modalities that may be used are F2F, Hyflex, Hybrid, or online, both synchronous and asynchronous instruction.

### Staying Home When Sick

If you are ill, please stay home and contact your health professional. In that case, please email the instructor to say you are missing class due to illness. Signs of illness include, but are not limited to, the following:

- Cough
- Fever of 100.4 or higher
- Runny nose or new sinus congestion
- Shortness of breath or difficulty breathing
- Chills
- Sore Throat
- New loss of taste and/or smell

### Seating Plans

Students will sit in the same seat for every F2F class so that the instructor can use a seating plan for contact tracing if a student contracts Covid-19.

## **Student Resources**

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This link contains information on help and resources available to students: [KSU Student Resources for Course Syllabus](#)