George Mason University
DFOR- 672 Mobile Device Forensics
CRN 17109 SEC DL1
3.0 Credit Hours
Spring- Jan 21, 2025 – May 5, 2025
Mondays 7:20pm - 10:00pm - **Synchronous Online Blackboard Ultra Collaborate**
Instructor:
Jessica Hyde
jhyde@gmu.edu
Office hours: Available Wed 5:30-6:30pm or Upon Request
Recommended Prerequisites: CFRS 510, CFRS 661

Recommended Textbooks:
Bair, J. (2018). *Seeking the truth from mobile evidence: Basic fundamentals, intermediate and advanced overview of current mobile forensic investigations*. London: Academic Press. ISBN 978-0128110560

Mahalik, H., Tamma, R., & Bommisetty, S. (2016 or newer edition). *Practical Mobile Forensics: A hands-on guide to mastering mobile forensics for the iOS, Android, and Windows Phone platforms*. Birmingham: Packt Publishing. ISBN: 978-1783288311 or 978-1786464200 or 978-1788839198 or 978-1838647520

Optional Textbook:
Reiber, L. (2016 or newer edition). Mobile forensic investigations: *A guide to evidence collection, analysis, and presentation*. New York, NY: McGraw Hill Education. ISBN: 978-0-07-184363-8 or 978-1260135091

Required Materials:
You must have a personal laptop computer for the hands-on lab capable of using the forensic tools that will be made available on Blackboard prior to the virtual class meeting for which they are required. Additionally, you must have a headset or mic capable of both listening to and responding to the synchronous remote lectures on Monday evenings using Blackboard Collaborate. Download links for required software will be provided by the instructor and disseminated via Blackboard.

Course Description:
This course will familiarize students with mobile forensics. We will focus on data types, storage, acquisition, and analysis of data from mobile devices. Students will utilize industry best practices for acquisition, analysis, and presentation of data from mobile devices. This class will be a mixture of lecture and hands-on acquisition and analysis. *The material provided in the course is proprietary*. Uploading this material anywhere without express permission of the instructor is strictly prohibited and a violation of the Mason Honor Code.

Course Schedule: ***Subject to Change***

Meet	Date	Topic	Reading	Homework
1	Jan 27	Mobile Phone Networks, Data Sources, and Data Presentation	Rec: Bair Ch 5, Ch 7 Opt: Reiber Ch 1, 14	SOP/Res Project Dist
2	Feb 3	Mobile Forensics vs Computer Forensics and Mobile Forensic Image	Rec: Bair Ch 1, 2, 3, 4 Mahalik Ch 1 Opt: Reiber Ch 2 - 4	Hmwk 1 Dist Proj Selection
3	Feb 10	Mobile Data Preservation and Acquisition Methodology	Rec: Bair Ch 8 -11, 13 Opt: Reiber Ch 5, 6	SOP: Reporting/ Res: Concept Acq Lab Dist
4	Feb 17	Mobile Acquisition Day	Rec: Bair Ch 6 Opt: Reiber Ch 9	SOP: Seizure Hmwk 1 Due
5	Feb 24	Creating Test Data for Mobile Analysis Methodology	Rec: Bair Ch 10 Opt: Reiber Ch 13	SOP Acquisition Res: Test Acq Acquisition Lab Due
6	Mar 3	Mobile Analysis - Hex, Binary, Timestamps and SIM	Rec: Bair Ch 6 Opt: Reiber Ch 9	Midt Dist
	Mar 10	Spring Break		
7	Mar 17	Mobile Analysis - Android	Rec: Bair Ch 10 Opt: Reiber Ch 13	Res: Test Plan Hmwk 2 dist
8	Mar 24	Mobile Analysis - iOS	Rec: Mahalik Ch 6 Opt: Reiber Ch 11	SOP: Android /Res: Update Hmwk 3 Dist
9	Mar 31	SQLite Analysis	Rec: Bair Ch 14	SOP: iOS/ Res : Update
10	Apr 7	PList Analysis		Hmwk 2 Due
11	Apr 14	Level DB Analysis		Hmwk 3 Due Res & SOP: Draft
12	Apr 21	Protobuf Analysis		
13	Apr 28	Analysis Lab Day	Rec: Bair Ch 17 Rec: Mahalik Ch 11, 13 Opt: Reiber Ch 12	Final Proj Due Analysis Lab Due
14	May 5	Mobile Malware, Comparative Analysis, IoT, and Challenges		Final Proj Due
15	May 12	Final* Anytime on that date		Final

Grading:

Weights		Letter Grades
Homework	15 % (three assignments at 5 points each)	A+ 98-100
Labs	10 % (two labs at 5 points each)	A 92-98
Project	25 %	A- 90-91
Midterm	25 %	B+ 87-89
Final	25 %	B 83-86
		B- 80-82
		C 70-79
		F 0-69

The Midterm and Final exams are cumulative and will be timed online exams.

Any use of AI must be disclosed and approved. We welcome new technology, but it is a requirement that the use of AI, like ChatGPT, be approved ahead of time and will be determined on a case-by-case basis.

Attendance Policy

Students are expected to attend each class, to complete any required preparatory work (including assigned reading) and to participate actively in lectures, discussions, and exercises. As members of the academic community, all students are expected to contribute regardless of their proficiency with the subject matter. Students are expected to make prior arrangements with Instructor if they know in advance that they will miss any class and to consult with the Instructor if they miss any class without prior notice. Departmental policy requires students to take exams at the scheduled time and place, unless there are truly compelling circumstances supported by appropriate documentation. Except in such circumstances, failure to attend a scheduled exam may result in a grade of zero (0) for that exam.

Communications

Communication on issues relating to the individual student should be conducted using e-mail, E-mail messages from the Instructor to all class members will be sent to students' GMU email addresses – if you use another email account as your primary address, you should forward your GMU email to that account. **Students must utilize their GMU email account to contact the instructor.**

Honor Code

Students are required to be familiar and comply with the requirements of the GMU Honor Code. The Honor Code will be strictly enforced in this course.

Accommodations for Disabilities

If you have a documented learning disability or other condition that may affect academic performance you should: 1) make sure this documentation is on file with Office for Disability

Services (SUB I, Rm. 4205; 993-2474;http://ods.gmu.edu) to determine the accommodations you need; and 2) talk with me to discuss your accommodation needs.