



## Master Course Syllabus

For additional course information, including prerequisites, corequisites, and course fees, please refer to the Catalog: <https://catalog.uvu.edu/>

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**Semester:** Spring

**Year:** 2025

**Course Prefix:** CYBR

**Course and Section #:** 2800.601

**Course Title:** Computer Forensics Fundamentals

**Credits:** 3

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### *Course Description*

Explores procedures for identification, preservation, and extraction of electronic evidence. Emphasizes auditing and investigation of network and host system intrusions, analysis and documentation of information gathered, and preparation of expert testimonial evidence. Examines forensic tools and resources for system administrators and information system security officers. Includes ethics, law, policy, and standards concerning digital evidence. Includes hands-on learning and a research paper or project.

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### *Course Attributes*

This course has the following attributes:

- General Education Requirements
- Global/Intercultural Graduation Requirements
- Writing Enriched Graduation Requirements
- Discipline Core Requirements in Program
- Elective Core Requirements in Program
- Open Elective

Other: *Click here to enter text.*

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### *Instructor Information*

**Instructor Name:** George D. Hickman

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### *Student Learning Outcomes*

Conduct a computer forensics investigation  
Secure and collect computer evidence at an incident scene  
Analyze disk and file structures of common operating systems  
Locate and recover hidden or damaged files  
Investigate Internet and e-mail crimes and violations  
Generate report findings with software tools

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### *Course Materials and Texts*

Cengage CompTIA Security+ Guide to Network Security Fundamentals By Mark Ciampa 8<sup>th</sup> edition ISBN 979-8-214-00063-3

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## ***Course Requirements***

### **Course Assignments, Assessments, and Grading Policy**

| <b>Activity</b>            | <b>Percent</b> |
|----------------------------|----------------|
| NetLabs                    | 20             |
| HO (Book)<br>Projects/Labs | 25             |
| Quizzes                    | 10             |
| Mid Term                   | 10             |
| Final                      | 15             |
| Review Qs                  | 10             |
| Papers                     | 10             |

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### **Required or Recommended Reading Assignments**

Textbook.

There will be twelve papers, one to two pages in length assigned. A file for each assigned reading is in Canvas. These papers are to be a summary of the assigned reading; the concluding paragraph is to be an opinion section for you to express your views on the assigned reading and to state the relevance of the article.

Procedure for collection of cyber digital evidences

Searching and seizing

Cyber Crime Investigation

The darker side of computer forensics  
Indicators of Compromise: Memory Forensics  
Anti-Forensics techniques  
Forensic acquisition and Analysis of VMWare VHDs  
GPS evidence acquisition  
Your money or your files  
Sixth circuit upholds search warrant of cell phone – 2016 US v Rarick  
Application of social media forensics to investigate social media crimes

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### **General Description of the Subject Matter of Each Lecture or Discussion**

Understanding the Digital Forensics Profession and Investigations  
Report writing and testimony for digital investigations  
Data acquisition  
Processing crime and incident scenes  
Working with Microsoft file systems and Windows registry  
Linux and Macintosh file systems  
Media files and digital forensics  
Virtual machine forensics and live acquisition forensics  
Midterm exam  
Network forensics  
Cloud forensics and Internet of anything  
Mobile device forensics  
Email and Social Media Investigations  
Ethics and professional responsibilities

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### ***Required Course Syllabus Statements***

#### **Generative AI**

The incorporation of generative artificial intelligence (AI) tools and technologies is encouraged to enhance the learning experience and facilitate the learning process. Generative AI refers to computer systems capable of producing creative outputs, such as text, images, or other content, based on patterns and data provided to them.

Acceptable uses: Using search tools to find resources. Google and other search engines are a form of AI.

Prohibited uses: Uploading reading assignments and having AI write your paper!

Additional Information: AI can be a useful tool, but is no substitute for your own work. AI does not evaluate sources the same way you might, and can include information that is old or just wrong. Especially in a legal field like forensics, it is important to base opinions upon current and accurate information. Supreme Court and other appellate court findings can change precedents, and quoting an old standard can ruin your professional reputation.

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## Using Remote Testing Software

This course does not use remote testing software.

This course uses remote testing software. Remote test-takers may choose their remote testing locations. Please note, however, that the testing software used for this may conduct a brief scan of remote test-takers' immediate surroundings, may require use of a webcam while taking an exam, may require the microphone be on while taking an exam, or may require other practices to confirm academic honesty. Test-takers therefore shall have no expectation of privacy in their test-taking location during, or immediately preceding, remote testing. If a student strongly objects to using test-taking software, the student should contact the instructor at the beginning of the semester to determine whether alternative testing arrangements are feasible. Alternatives are not guaranteed.

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## *Required University Syllabus Statements*

### **Accommodations/Students with Disabilities**

Students needing accommodations due to a permanent or temporary disability, pregnancy or pregnancy-related conditions may contact UVU [Accessibility Services](#) at [accessibilityservices@uvu.edu](mailto:accessibilityservices@uvu.edu) or 801-863-8747.

Accessibility Services is located on the Orem Campus in BA 110.

Deaf/Hard of Hearing students requesting ASL interpreters or transcribers can contact Accessibility Services to set up accommodations. Deaf/Hard of Hearing services can be contacted at [DHHservices@uvu.edu](mailto:DHHservices@uvu.edu)

DHH is located on the Orem Campus in BA 112.

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### **Academic Integrity**

At Utah Valley University, faculty and students operate in an atmosphere of mutual trust. Maintaining an atmosphere of academic integrity allows for free exchange of ideas and enables all members of the community to achieve their highest potential. Our goal is to foster an intellectual atmosphere that produces scholars of integrity and imaginative thought. In all academic work, the ideas and contributions of others must be appropriately acknowledged and UVU students are expected to produce their own original academic work.

Faculty and students share the responsibility of ensuring the honesty and fairness of the intellectual environment at UVU. Students have a responsibility to promote academic integrity at the university by not participating in or facilitating others' participation in any act of academic dishonesty. As members of the academic community, students must become familiar with their [rights and responsibilities](#). In each course, they are responsible for knowing the requirements and restrictions regarding research and writing, assessments, collaborative work, the use of study aids, the appropriateness of assistance, and other issues. Likewise, instructors are responsible to clearly state expectations and model best practices.

Further information on what constitutes academic dishonesty is detailed in [UVU Policy 541: Student Code of Conduct](#).

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### **Equity and Title IX**

Utah Valley University does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation, gender identity, gender expression, age (40 and over), disability, veteran status, pregnancy, childbirth, or pregnancy-related conditions, citizenship, genetic information, or other basis protected by applicable law, including Title IX and 34 C.F.R. Part 106, in employment, treatment, admission, access to educational programs and activities, or other University benefits or services. Inquiries about nondiscrimination at UVU may be directed to the U.S. Department of Education's Office for Civil Rights or UVU's Title IX Coordinator at 801-863-7999 – [TitleIX@uvu.edu](mailto:TitleIX@uvu.edu) – 800 W University Pkwy, Orem, 84058, Suite BA 203.

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### **Religious Accommodation**

UVU values and acknowledges the array of worldviews, faiths, and religions represented in our student body, and as such provides supportive accommodations for students. Religious belief or conscience broadly includes religious, non-religious, theistic, or non-theistic moral or ethical beliefs as well as participation in religious holidays, observances, or activities. Accommodations may include scheduling or due-date modifications or make-up assignments for missed class work.

To seek a religious accommodation, a student must provide written notice to the instructor and the Director of Accessibility Services at [accessibilityservices@uvu.edu](mailto:accessibilityservices@uvu.edu). If the accommodation relates to a scheduling conflict, the notice should include the date, time, and brief description of the difficulty posed by the conflict. Such requests should be made as soon as the student is aware of the prospective scheduling conflict.

While religious expression is welcome throughout campus, UVU also has a [specially dedicated space](#) for meditation, prayer, reflection, or other forms of religious expression.