Digital Forensics

HAGERSTOWN COMMUNITY COLLEGE

What is digital forensics?

Digital forensics is the process of acquiring, preserving, and analyzing electronic evidence in a way that is legally admissible in court. Digital forensic investigators will analyze information found on computers, laptops, tablets, cellphones, USB drives, printers, fitness devices, cars, GPS devices, medical devices, and networks. Digital forensics is also referred to as system forensics, computer forensics, computer forensics analysis, electronic discovery, data recovery, and computer analysis.

What do digital forensics specialists do?

Digital forensics specialists perform multiple roles across many different fields and platforms. They work in law enforcement investigating digital crimes; across many different fields and platforms. They also work in e-discovery acquiring, preparing, and presenting digital evidence in court; in the private sector working on intellectual property disputes, fraud cases, divorce, and other cases where digital media is involved; or recovering deleted or damaged data. Digital forensics specialist should possess strong analytical and investigative skills in order to uncover evidence on digital devices, such as cellphones, tablets, laptops, computers, GPS devices, personal fitness tracking devices, and cars. A forensic specialist will be able to locate deleted, encrypted, and hidden data in order to reconstruct past events or activities.

What is the employment outlook for this career?

The increased use of digital technology means that more and more organizations are becoming victims of cybercrime leading to increased demand for professionals with digital investigative skills. The US Bureau of Labor Statistics categorizes the work of computer forensic examiners under the information security analyst category. According to the U.S. Bureau of Labor Statistics, employment of information security analysts is expected to increase by 32 percent from 2018 to 2028, much faster than the average for all occupations. Demand for information security analysts is expected to be very high as these analysts will be needed to come up with innovative solutions to prevent hackers from stealing critical information or creating havoc on computer networks and to investigate cybercrime. (source: *www.bls.gov/ooh*)

Why should students choose HCC?

HCC has a state of the art digital forensics lab featuring uFRED forensics server and EnCase forensic software allowing students to gain hands-on experience on how to perform digital forensic investigations.

HCC students participate in digital forensics and cybersecurity competitions allowing them to hone and validate their skills.

- In 2015, HCC was one of the first community colleges in the nation to be named as a Center of Academic Excellence for Two-Year Education in information assurance (CAE2Y) for the second time by the National Security Agency.
- HCC digital forensics classes are taught in a five-story STEM (Science, Technology, Engineering, and Math) Building that features a state-of-the-art cybersecurity penetration testing and digital forensics lab.
- HCC has aligned many of its courses with Cyberwatch, a consortium of over 126 colleges, businesses, and government agencies. This alignment allows students to transfer seamlessly from HCC to a four-year college to complete their bachelor's degrees.
- Upon program completion, students will be prepared for several industry standard certification exams including:
  - CompTIA Network +, Security +
  - EC Council Security 5, Network 5, E|NSA, C |EH (Certified Ethical Hacker)
  - The International Society of Forensic Computer Examiners Certified Computer Examiner (CCE)

PROGRAM OPTIONS

✒ A.A.S. Degree, Digital Forensics Concentration

CAREER OUTLOOK

MEDIAN SALARY	EMPLOYMENT
$99K for information security analysts	131,000 jobs in the U.S. 31% growth in the next ten years

Job prospects will be best for college graduates who possess the latest technological skills, particularly graduates who have supplemented their formal education with relevant work experience.

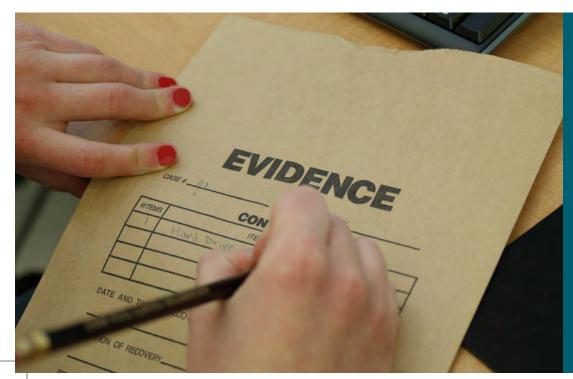*(source: www.bls.gov/ooh)*

Information Systems Technology, A.A.S.
Digital Forensics Option

The digital forensics concentration is designed to provide an introduction to the forensic investigation aspect of computers and related electronic data systems. The program includes an overview of forensic evidence collection methods, investigative techniques, and procedures suitable for persons exploring the digital forensics field as a career option. Those students interested in pursuing a career in a highly-specialized field can transfer credits to four-year colleges offering degree programs in digital/computer forensics. Students can also use the digital forensics option as a second degree to enhance career advancement.

General Education Requirements   18-20 credits

Arts/Humanities
Select from the approved
General Education course list....................................3

Behavioral/Social Sciences
Select from the approved
General Education course list....................................3

Biological/Physical Science
Select from the approved
General Education course list................................3-4

Diversity
Select from the approved
General Education course list....................................3

English
Select from the approved English General
Education course list 3
(ENG 112 is recommended)

Mathematics
Select from the approved math General
Education course list..3-4

Program Requirements .... 30 credits

CSC	109	UNIX/Linux Operating Systems	3
CSC	130	Fundamentals of Programming Design..	3
CYB	101	Introduction to Cybersecurity	3
CYB	210	Ethics in the Information Age...............	3
CYB	224	Ethical Hacking Fundamentals..............	3
IST	108	Microsoft Operating Systems...............	3
IST	154	Networking Basics	3
IST	166	Computer Forensics I — Principles and Practices.........................	3
IST	266	Computer Forensics II — Investigations Practices	3
IST	276	Network Forensics	3

Restricted Electives   10-12 credits
Select from the following list:

ADJ	101	Introduction to Criminal Justice	3
BTC	101	Introduction to Biotechnology	3
CYB	225	Tactical Perimeter Defense..................	3
CYB	246	Introduction to Cloud Computing	3
IST	150	PC Tech: Repair and Troubleshooting .	3
IST	151	PC Tech: Operating Systems................	3
IST	160	Introduction to Security Fundamentals	3
IST	173	Database Fundamentals	3
IST	261	Server Management I	3
IST	269	Internship I	1-3

Degree Requirement...........................60

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