



Digital Forensics

Objectives

Upon Completion of this course the student will be able to:

1

Perform the steps included in a digital investigation from the initial recognition of an incident through the steps of evidence gathering, preservation and analysis, and the completion of legal proceedings;

2

Identify important file metadata and apply their use in a forensic investigation;

3

Perform a forensic investigation on a forensic image, using various tools to recover evidence, resulting in a report documenting the investigation;

4

Write professional quality reports that include both a summary report.



Digital Forensics

Course Developed
by

Uttarakhand Open University, Haldwani

With support
of

Commonwealth Educational Media Centre for Asia, New
Delhi

ADVISORS



**Prof. OPS Negi, Vice
Chancellor, Uttarakhand Open
University, Haldwani**



**Prof. Madhu Parhar,
Director-CEMCA, New Delhi**



**Prof. Durgesh Pant, Director-
School of Computer Science &
IT, Uttarakhand Open
University, Haldwani**



**Dr. Manas Ranjan Panigrahi,
Sr. Program Officer,
CEMCA, New Delhi**

EXPERT PANEL



Dr. Jeetendra Pande, Associate Professor- Computer Science, School of Computer Science & IT, Uttarakhand Open University, Haldwani



Dr. Ajay Prasad, Sr. Associate Professor, University of Petroleum and Energy Studies, Dehradun



Dr. Akashdeep Bharadwaj, Professor, University of Petroleum and Energy Studies, Dehradun



Mr. Sridhar Chandramohan Iyer, Assistant Professor- Universal College of Engineering, Kaman, Vasai, University of Mumbai



Mr. Rishikesh Ojha, Digital Forensics and eDiscovery Expert



Ms. Priyanka Tewari, IT Consultant



Mr. Ketan Joglekar, Assistant Professor, GJ College, Maharashtra



Dr. Ashutosh Kumar Bhatt, Associate Professor, Uttarakhand Open University, Haldwani



Dr. Sangram Panigrahi, Assistant Professor, Siksha 'O' Anusandhan, Bhubaneswar

Course Introduction



INDEX

S. No.	Module Name	Pages
1	Introduction to Digital Forensic	1-28
2	Computer Forensics Investigation Process	1-31
3	Digital Evidence and First Responder Procedure	1-18
4	Types of Investigation	1-12
5	Understanding Storage Media	1-29
6	Understanding File System	1-20
7	Windows Forensics	1-19
8	Recovering Deleted Files and Partitions	1-15
9	Network forensics	1-17
10	Network Log Analysis and Forensics Tools	1-15
11	Logs & Event Analysis	1-19
12	Application Password Cracking	1-16
13	Wireless Attacks	1-18
14	Web Attacks	1-14
15	Web Attack Forensics	1-15
16	Electronics Mail	1-28
17	Investigating E-Mail Attacks	1-20
18	Mobile Device Forensics	1-20
19	Investigative reports, expert witness and cyber regulations	1-23
20	Hands-on Practical Guide	1-21



This MOOC has been prepared with the support of



© Commonwealth Educational Media Centre for Asia , 2021. Available in Creative Commons Attribution-ShareAlike 4.0 International license to copy, remix and redistribute with attribution to the original source (copyright holder), and the derivative is also shared with similar license.