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 Forensic

Course Developed
by
Uttarakhand Open University, Haldwani
With support
of
Commonwealth Educational Media Centre for Asia,
New Delhi

COURSE CONTENTS

COURSE DESCRIPTION

Computer forensics, or digital forensics, is a fairly new field. Computer forensics investigators, also known as computer forensics specialists, computer forensics examiners, or computer forensics analysts, are charged with uncovering and describing the information contained on, or the state or existence of, a digital artifact. Digital artifacts include computer systems, hard drives, CDs, and other storage devices, as well as electronic documents and files like emails and JPEG images. The fast-growing field of computer forensics includes several branches related to firewalls, networks, databases, and mobile devices. Digital forensics technicians can find work with many types of organizations: government (local, state, and federal), accounting firms, law firms, banks, and software development companies. Essentially, any kind of organization that has a computer system may have a need for a digital forensics specialist. Some digital forensics specialists opt to start their own businesses, giving them an opportunity to work with a variety of clients. Computer forensics investigators provide many services based on gathering digital information, from investigating computer systems and data in order to present information for legal cases to determining how an unauthorized user hacked into a system. A digital forensics examiner does many things in the course of these tasks – protects the computer system, recovers files (including those that were deleted or encrypted), analyses data found on various disks, and provides reports, feedback, and even testimony when required. The employment outlook for digital forensics examiners and investigators is favorable due to the rapid growth of crimes involving computers (cybercrime).

LEARNING OUTCOMES

After the successful completion of this course, the learner will be able to:

A. Understand the importance of a systematic procedure for investigation of data found on digital storage media that might provide evidence of wrong-doing.
B. Understand the file system storage mechanisms of the operating systems.
C. Use tools for faithful preservation of data on disks for analysis.
D. Find data that may be clear or hidden on a computer disk.
E. Learn the use of computer forensics tools used in data analysis, such as searching, absolute disk sector viewing and editing, recovery of files, password cracking, etc.
F. Understand how to present the results of disk data analysis in a court proceeding as an expert witness.

CERTIFICATE

A completion certificate issued jointly by UOU and CEMCA will be available based on your level of participation and completion of tasks/activities: requires 60% on each quiz and participation in discussion forum.

DURATION AND MEDIUM

It's a 4 Weeks course which is offered in English.

INSTRUCTORS

Prof. Durgesh Pant, Professor- School of Computer Science & IT & Director, Online Program Cell Uttarkhand Open University, Haldwani	Dr. Jeetendra Pande, Associate Professor- Comp. Sc. & Dy. Director, Online Program Cell, Uttarkhand Open University, Haldwani
Gp. Cap.(Er) Ashok Kumar, Indian Air Force, New Delhi	Dr. Akashdeep Bharadwaj, Professor, University of Petroleum and Energy Studies, Dehradun
Mr. Rishikesh Ojha, Team Lead-eDiscovery, UnitedLex Corporation, USA	Mr. Sridhar Chandrmohan Iyer, Assistant Professor- Computer Science, Universal College of Engineering, Vasai, Maharashtra
Dr. Sangram Panigrahi, Assistant Professor-Computer Science, Siksha 'O' Anusandhan, Deemed to be University, Bhubaneswar-751030, Odisha, India	

COURSE DESIGNER AND COORDINATOR

Dr. Jeetendra Pande
Associate Professor- Computer Science,
School of Computer Science & IT
Uttarakhand Open University, Haldwani E-mail: jpande@uou.ac.in

ORIENTATION OF THE MENTORS AND THE INSTRUCTORS

An online orientation session for all the instructors and the mentors was conducted on 8th July, 2021 at 11:00 am. Dr. Manas Ranjan Panigrahi, Sr. Program Officer-CEMCA, Dr. G. Mythali Deputy Director- Stride-IGNOU, Mr. Ashish Kumar Awadhiya- Astt. Director- Centre for Online Education-IGNOU and Dr. Jeetendra Pande, Associate Professor- Computer Science, Uttarakhand Open University attended the session.Dr. Jeetendra Pande, the course coordinator of the online training program briefed about the UOU's MOODLE based LMS through which the course is offered. He also informed that four online live discussion sessions are also planned on weekends. The experts advised to conduct the live session at evening hrs keeping the engagement of the participants in the day hrs. It was decided to conduct the live discussion session through ZOOM platform at 18:00 Hrs on 17th July, 24th July, 31st July and 7th Aug. 2021. The login credentials were shared with the experts and mentors via email.

INAUGURAL SESSION

The inaugural session was conducted on 21st June, 2021 at 11:00 AM through online mode on ZOOM. More than 337 participants attended the session. Dr. Jeetendra Pande, Course Coordinator welcomed all the participants and gave an overview of the program.

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FIGURE 1: WELCOME TO THE PARTICIPANTS BY DR. JEETENDRA PANDE

It was followed by the speech of Prof. Madhu Parhar- Director, CEMCA who highlighted the importance of online education specially in the pandemic situation. She stressed on the fact that the future is of Online Education. Normally we as a teacher, administrator and policy-makers underestimated its true potential but pandemic had given us the opportunity to explore its true potential. She further informed that CEMCA is working together with different institutions with an aim to improve the quality of higher-education, especially Open and Distance Education. She quoted that NASSCOM reported India shall be requiring 1 million cyber security professionals in the near future. Therefore, CEMCA decided to offering a skill-based online course on Digital Forensics in collaboration with Uttarakhand Open University.
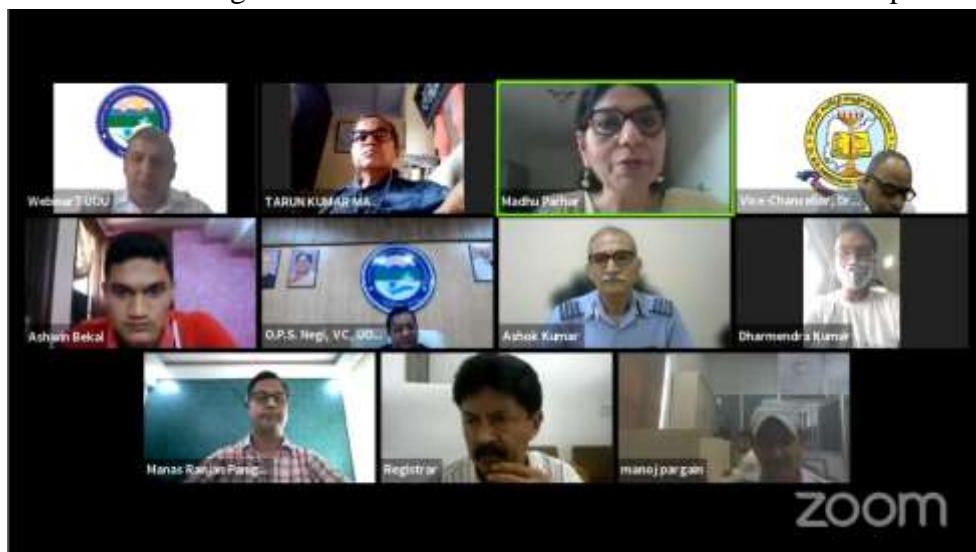

FIGURE 2: ADDRESS BY PROF. MADHU PARHAR

Prof. Durgesh Pant, Director- School of Computer Science & IT, UOU said we are living in a networked world of more than 7.5 billion people and about more that 3 billion people have

access to Internet. With www spreading its reach, protection of cyber-ecosystem is topmost priority of the Countries around the globe. Therefore, this online training program on digital forensics is important for skilling the youth in the field of cyber security and digital forensics.

FIGURE 3: ADDRESS BY PROF. DURGESH PANT

The chief guest of the inaugural session Prof K. Sita Rama Rao, Vice Chancellor- Dr. B.R. Ambedkar Open University (BRAOU), Hydrabad said that Digital Forensics have become one of the important areas added to the conventional forensic science.

FIGURE 4: ADDRESS BY THE CHIEF GUEST OF THE INAUGURALS SESSION PROF K. SITA RAMA RAO

It mainly focuses on the retrieval of data from the electronic storage devices especially from mobile phones, HDD, pen drive, flash drive, RAM, etc. It helps in systematic and scientific recovery of the data and the evidence. This filed not only provides opportunities for the learners to work in the large IT and service industries but provide ample opportunity to work independently as a freelancer. This online training program is a wonderful contribution from UOU and CEMCA for developing the skills in this important area. He also appraised the efforts of the management of Uttarakhand Open University for starting online assignments. Despite

the fact that UOU is a late entering on the field of ODL as compared to other State Open Universities, it is highly competent, specially in the field of online education and slowly becoming the role model for other Open Universitates.

FIGURE 5: ADDRESS BY THE CHAIRMAN OF THE INAUGURALS SESSION

Prof. OPS Negi informed that the Online Journey of UOU in the filed of online delivery of course started in the year 2019 with a MOOC on "Introduction to Cyber Security" was offered through SWAYAM platform. This course has been offered in 4 cycles till date and more that 50,000 learners from more than 48 countries have enrolled in this course. Recently, UOU have offered an online FDP program on "Developing Online Course for SWAYAM" which was attended by more than 1400 faculty member representing 25 States and Union Territories of the Country. A huge demand for experts in the field of cyber security is envisioned.

FIGURE 6: PANELIST AND PARTICIPANTS

Therefore, this course plays a vital role for creating capacity in the field of Digital Forensics in large scale. Computer forensics investigators provide many services based on gathering digital information, from investigating computer systems and data in order to present information for legal cases to determining how an unauthorized user hacked into a system. A digital forensics examiner does many things in the course of these tasks – protects the computer system, recovers files, analyses data found on various disks, and provides reports, feedback, and even testimony when required. The employment outlook for digital forensics examiners and investigators is favorable due to the rapid growth of crimes involving computers.

FIGURE 7: VOTE OF THANKS BY DR. H.S. NAYAL, REGISTRAR, UOU

Prof. H.S. Nayal, Registrar-UOU delivered the vote of thanks to all the dignitaries and the participants.

DETAILS ABOUT THE COURSES

UOU offered 4-week online training program from 12 July to 09 August, 2021 through MOODLE platform. Course materials were designed and developed by Dr. Jeetendra Pande, Associate Professor-Computer Science, Uttarakhand Open University and his team. The content includes video lectures, power point presentation, transcripts, etc. were uploaded and placed in the sequential manner and provided navigation for easy access. Details about the course are given below:

Courses	Start Date	End Dates	No of Modules	No of Instructors
Digital Forensics	12-07-2021	09-08-2021	20	7

Participants Registration and Participation

Initially, UOU announces the courses details in the University website, Social Media platforms like Facebook, Linkedin, etc. and invited the participants for registration through google form. Total 3670 participants registered for the online training program on Digital Forensics. To facilitate the registration on the course portal, the organizers created the login for the participants and the credentials were sent to them along with instruction through registered email. Out of total 3670 applications, 2851 participants registered for the course on the course portal. 1211 participants never logged in to the portal after registration. So, there were 1647 participants who registered for the course and logged in to the course portal for at least once.

Gender

It is evident that out of 3670 participants, 2652(72.3%) were male, 1003(27.3%) were female and15(0.4%) participants preferred not to disclose their gender. This reveals that more male participants registered in the course as compared to the female participants.
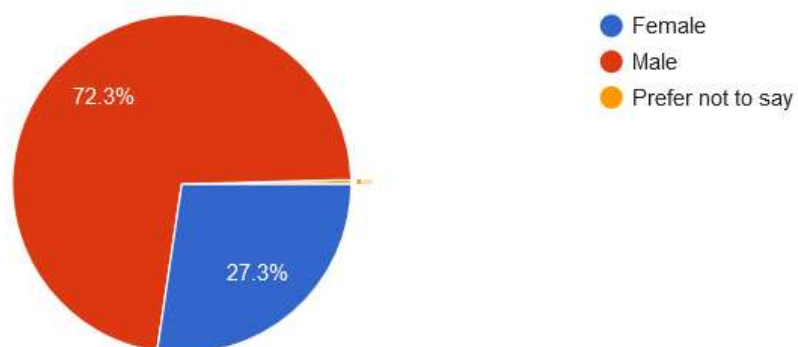
You are

3,670 responses

FIGURE 8: SHOWS PERCENTAGE OF MALE AND FEMALE PARTICIPANTS

MONITORING THE PROGRESS OF PARTICIPANTS USING LOG REPORT OF MOODLE

Log Report of MOODLE shows activity within the course. It allows teachers to see what course material and activity are being used and when by the participants. For example, a teacher can check that an individual participant has viewed the course material for that week or topic they declare to have read, and how long. This helps the teacher to monitor the participants and motivate them to take part in the course. The log reports of the 4-week online training program on Digital Forensics offered by the UOU and CEMCA have analysed and the data are given in the following sections.

Learning Objectives viewed by the Participants

Learning objectives are statements which describe the expected outcome of a curriculum, course, lesson or activity in terms of demonstrable skills or knowledge that will be acquired by the participants after completing the course. The figure shows that the number of participants accessed the learning objectives of the online training program which was listed under the Announcement. There is total 2089 views by 671 users. It is important that the participants should view the learning objectives to know the outcomes of the course.

📢 Announcements	2089 views by 671 users

Course materials viewed by the participants

Course materials are most essential component for online courses. Participants learn from this content to enrich themselves. The content should be interesting as the teacher is away from them. Since the course access through devices, the content should be enriching with multimedia component to retain the attention of the participants.   This course has 20 modules arranged in 84 topics and has videos, pdf of transcript and ppt files for content. The participants have accessed the content to learn the course.

The first module of the online training program is "Introduction to Digital Forensics" and the instructor for this module is Dr. Jeetendra Pande, Associate Professor- Computer Science, Uttarakhand Open University, Haldwani. The video lecture "Definition of Computer Forensics" is viewed 3489 time by total 1272 users. The video lecture "Cyber Crime" is viewed 2156 time by total 1170 users. The video lecture "Evolution of Computer Forensics" is viewed 1733 time by total 1110 users. The video lecture "Objective of Computer Forensics" is viewed 1447 time by total 1071 users. The video lecture "Roles of Forensics Investigator" is viewed 1396 time by total 1040 users. The video lecture "Forensics Readiness" is viewed 1507 time by total 1036 users. The video lecture "Steps for Forensics" is viewed 1591 time by total 1024 users. The e-text for this lecture is viewed 991 times by 448 users and the transcript is viewed 1764 times by 937 users.

Introduction to Digital Forensics

Definition of Computer Forensics[CLICK HERE TO VIEW THE VIDEO LECTURE]	3489 views by 1272 users	Wednesday, 25 August 2021, 9:31 PM (8 hours 39 mins)
Cyber Crime[CLICK HERE TO VIEW THE VIDEO LECTURE]	2156 views by 1170 users	Wednesday, 25 August 2021, 9:37 PM (8 hours 34 mins)
Evolution of Computer Forensics[CLICK HERE TO VIEW THE VIDEO LECTURE]	1733 views by 1110 users	Wednesday, 25 August 2021, 9:37 PM (8 hours 33 mins)
Objectives of Computer Forensics[CLICK HERE TO VIEW THE VIDEO LECTURE]	1447 views by 1071 users	Wednesday, 25 August 2021, 9:50 PM (8 hours 21 mins)
Roles of Forensics Investigator[CLICK HERE TO VIEW THE VIDEO LECTURE]	1396 views by 1040 users	Wednesday, 25 August 2021, 10:16 AM (19 hours 55 mins)
Forensics Readiness[CLICK HERE TO VIEW THE VIDEO LECTURE]	1507 views by 1036 users	Wednesday, 25 August 2021, 12:42 PM (17 hours 29 mins)
Steps for Forensics[CLICK HERE TO VIEW THE VIDEO LECTURE]	1591 views by 1024 users	Wednesday, 25 August 2021, 12:52 PM (17 hours 19 mins)
Introduction to Digital Forensics(e-text)	1764 views by 937 users	Wednesday, 25 August 2021, 12:52 PM (17 hours 18 mins)

The second module is "Computer Forensics Investigation Process" and the instructor for this module is Dr. Jeetendra Pande, Associate Professor- Computer Science, Uttarakhand Open University, Haldwani. There is total 5 video lectures and 1 e-text file in this module. The details of the total views of the video lecture by the users is given below.

Computer Forensics Investigation Process

Computer Forensics Investigation Process	1452 views by 975 users	Wednesday, 25 August 2021, 1:25 PM (16 hours 46 mins)
Computer Forensics Investigation Process-Assessment Phase	1415 views by 962 users	Wednesday, 25 August 2021, 10:16 AM (19 hours 54 mins)
Acquire the Data	1260 views by 949 users	Wednesday, 25 August 2021, 10:16 AM (19 hours 54 mins)
Analyze the Data	1205 views by 941 users	Wednesday, 25 August 2021, 10:16 AM (19 hours 54 mins)
Report the Investigation	1139 views by 935 users	Wednesday, 25 August 2021, 10:16 AM (19 hours 54 mins)
Computer Forensics Investigation Process(e-text)	1320 views by 804 users	Wednesday, 25 August 2021, 10:17 AM (19 hours 54 mins)

The third module is "Digital Evidence and First Responder Procedure" and the instructor for this module is Dr. Jeetendra Pande, Associate Professor- Computer Science, Uttarakhand Open University, Haldwani. There is total 4 video lectures and 1 e-text file in this module.

The details of the total views of the video lecture by the users is given below.

Digital Evidence and First Responder Procedure			
📄 Digital Evidence	1191 views by 916 users	-	Wednesday, 25 August 2021, 10:17 AM (19 hours 54 mins)
📄 Digital Evidence Investigation Process	1105 views by 913 users	-	Wednesday, 25 August 2021, 10:17 AM (19 hours 54 mins)
📄 First Responders Toolkit	1108 views by 909 users	-	Wednesday, 25 August 2021, 10:17 AM (19 hours 54 mins)
📄 Issues Facing Computer Forensics	1095 views by 907 users	-	Wednesday, 25 August 2021, 10:17 AM (19 hours 54 mins)
📄 Digital Evidence and First Responder Procedure(e-text)	1153 views by 759 users	-	Wednesday, 25 August 2021, 10:17 AM (19 hours 54 mins)

The fourth module is "Types of Investigation" and the instructor for this module is Dr. Jeetendra Pande, Associate Professor- Computer Science, Uttarakhand Open University, Haldwani. There is total 2 video lectures and 1 e-text file in this module. The details of the total views of the video lecture by the users is given below.

Types of Investigation			
📄 Types of Investigation	1119 views by 903 users	-	Wednesday, 25 August 2021, 10:17 AM (19 hours 54 mins)
📄 Techniques in digital forensics	1078 views by 900 users	-	Wednesday, 25 August 2021, 10:17 AM (19 hours 54 mins)
📄 Types of Investigation(e-text)	1116 views by 742 users	-	Wednesday, 25 August 2021, 5:32 PM (12 hours 39 mins)

The fifth module is "Understanding Storage Media" and the instructor for this module is Dr. Jeetendra Pande, Associate Professor- Computer Science, Uttarakhand Open University, Haldwani. There is total 4 video lectures and 1 e-text file in this module. The details of the total views of the video lecture by the users is given below.

Understanding Storage Media			
📄 The Booting Process	1126 views by 895 users	-	Wednesday, 25 August 2021, 10:17 AM (19 hours 54 mins)
📄 LINUX Boot Process	1097 views by 890 users	-	Wednesday, 25 August 2021, 10:17 AM (19 hours 53 mins)
📄 Mac OS Boot Sequence	1042 views by 883 users	-	Wednesday, 25 August 2021, 10:17 AM (19 hours 53 mins)
📄 Windows 10 Booting Sequence	1085 views by 884 users	-	Wednesday, 25 August 2021, 10:17 AM (19 hours 53 mins)
📄 Understanding Storage Media(e-text)	1227 views by 761 users	-	Wednesday, 25 August 2021, 5:32 PM (12 hours 39 mins)

The sixth module is "Understanding File System" and the instructor for this module is Dr. Jeetendra Pande, Associate Professor- Computer Science, Uttarakhand Open University, Haldwani. There is total 2 video lectures and 1 e-text file in this module. The details of the total views of the video lecture by the users is given below.

Understanding File System		
File System	1044 views by 831 users	Wednesday, 25 August 2021, 8:03 PM (10 hours 10 mins)
Type of File Systems	1003 views by 823 users	Wednesday, 25 August 2021, 8:07 PM (10 hours 4 mins)
Understanding File System(e-text)	1032 views by 677 users	Wednesday, 25 August 2021, 5:32 PM (12 hours 38 mins)

The seventh module is "Windows Forensics" and the instructor for this module are Dr. Ajay Prasad, Sr. Astt Professor, University of Petroleum and Energy Studies, Dehradun and Mr. Sridhar Chandramohan Iyer, Assistant Professor, Universal College of Engineering, Mumbai. There is total 11 video lectures and 1 e-text file in this module. The details of the total views of the video lecture by the users is given below.

Windows Forensics		
Introduction to Windows Forensics	991 views by 815 users	Wednesday, 25 August 2021, 8:38 PM (9 hours 35 mins)
Windows Forensics Volatile Information	1009 views by 812 users	Wednesday, 25 August 2021, 8:40 PM (9 hours 31 mins)
Windows Forensics Non- Volatile Information	996 views by 810 users	Wednesday, 25 August 2021, 8:54 PM (9 hours 17 mins)
Recovering deleted files and partitions	1008 views by 810 users	Wednesday, 25 August 2021, 9:31 PM (8 hours 40 mins)
Windows Forensics Summary	952 views by 808 users	Wednesday, 25 August 2021, 9:32 PM (8 hours 38 mins)
Digital Forensics Road map: Static Data Acquisition from windows using FTK Imager	1017 views by 804 users	Wednesday, 25 August 2021, 9:35 PM (8 hours 36 mins)
Live Data Acquisition using FTK Imager	1000 views by 803 users	Wednesday, 25 August 2021, 10:03 PM (8 hours 8 mins)
FTK Imager	975 views by 798 users	Wednesday, 25 August 2021, 10:10 PM (8 hours)
Installation of KALI Linux	963 views by 798 users	Wednesday, 25 August 2021, 11:04 PM (7 hours 7 mins)
RAM Dump Analysis using Volatility	930 views by 796 users	Wednesday, 25 August 2021, 10:26 PM (7 hours 45 mins)
Static Data Acquisition from Linux OS	949 views by 791 users	Wednesday, 25 August 2021, 10:24 AM (19 hours 47 mins)
Windows Forensics(e-text)	1035 views by 660 users	Wednesday, 25 August 2021, 5:32 PM (12 hours 38 mins)

The eighth module is "Recovering Deleted Files and Partitions" and the instructor for this module are Dr. Akashdeep Bharadwaj, Professor, University of Petroleum and Energy Studies, Dehradun, Mr. Sridhar Chandramohan Iyer, Assistant Professor, Universal College of Engineering, Mumbai and Mr. Rishikesh Ojha, Forensics Expert from Industry. There is total

6 video lectures and 1 e-text file in this module. The details of the total views of the video lecture by the users is given below.

Recovering Deleted Files and Partitions

Recovering Deleted Files and Partitions	955 views by 789 users	–	Wednesday, 25 August 2021, 10:24 AM (19 hours 47 mins)
Windows Forensics Summary	903 views by 789 users	–	Wednesday, 25 August 2021, 10:24 AM (19 hours 47 mins)
Digital Forensics Tools	945 views by 786 users	–	Wednesday, 25 August 2021, 10:24 AM (19 hours 46 mins)
Overview of EnCase Forensics	910 views by 781 users	–	Wednesday, 25 August 2021, 10:24 AM (19 hours 46 mins)
Deep Information Gathering Toot Dmitry	901 views by 780 users	–	Wednesday, 25 August 2021, 10:24 AM (19 hours 46 mins)
Computer Forensics Live Practical by using Autopsy and FTK Imager	919 views by 780 users	–	Wednesday, 25 August 2021, 11:04 AM (19 hours 6 mins)
Recovering Deleted Files and Partitions(e-text)	968 views by 643 users	–	Wednesday, 25 August 2021, 5:32 PM (12 hours 38 mins)

The nineth module is "Network Forensics" and the instructor for this module is Dr. Ajay Prasad, Sr. Astt. Professor, University of Petroleum and Energy Studies, Dehradun. Some of the videos(The Difference Between Hubs, Bridges, Switches and Gateways; 7 Layers of OSI Model), which are available under Creative Commons Licenses, are adopted from Youtube. There is total 6 video lectures and 1 e-text file in this module. The details of the total views of the video lecture by the users is given below.

Network forensics

Introduction to Network Forensics	917 views by 781 users	–	Wednesday, 25 August 2021, 10:25 AM (1 day 19 hours)
Network Components and their forensic importance	908 views by 779 users	–	Wednesday, 25 August 2021, 10:55 AM (1 day 18 hours)
The Difference Between Hubs, Bridges, Switches and Gateways (Backbones)	901 views by 779 users	–	Wednesday, 25 August 2021, 10:58 AM (1 day 18 hours)
7 Layers of OSI Model	880 views by 778 users	–	Wednesday, 25 August 2021, 11:02 AM (1 day 18 hours)
OSI internet Layers and their Forensic importance	888 views by 777 users	–	Wednesday, 25 August 2021, 11:09 AM (1 day 18 hours)
Tools Introduction Wireshark and TCPDUMP	908 views by 769 users	–	Wednesday, 25 August 2021, 11:10 AM (1 day 18 hours)
Network forensics(e-text)	1025 views by 656 users	–	Wednesday, 25 August 2021, 5:53 PM (1 day 12 hours)

The tenth module is "Network Log Analysis and Forensic Tools" and the instructor for this module is Mr. Sridhar Chandramohan Iyer, Assistant Professor, Universal College of Engineering, Mumbai. There is total 5 video lectures and 1 e-text file in this module. The details of the total views of the video lecture by the users is given below.

Network Log Analysis and Forensics Tools

📄 Packet Sniffing and Analysis using Ettercap and Wireshark	1038 views by 828 users	–	Wednesday, 25 August 2021, 11:30 AM (1 day 18 hours)
📄 Network Forensics	945 views by 816 users	–	Wednesday, 25 August 2021, 12:07 PM (1 day 17 hours)
📄 Wireshark Packet Analyzer	969 views by 816 users	–	Thursday, 26 August 2021, 6:50 PM (11 hours)
📄 Packet Capture using TCP DUMP	970 views by 816 users	–	Wednesday, 25 August 2021, 11:30 AM (1 day 18 hours)
📄 Website Penetration: WHOIS, nslookup	964 views by 816 users	–	Friday, 27 August 2021, 5:36 AM (14 mins 22 secs)
📄 Network Log Analysis and Forensics Tools	914 views by 636 users	–	Thursday, 26 August 2021, 10:44 AM (19 hours 6 mins)

The eleventh module is "Log and Event Analysis" and the instructor for this module are Mr. Sridhar Chandramohan Iyer, Assistant Professor, Universal College of Engineering, Mumbai and Dr. Ajay Prasad, Sr. Astt. Professor, University of Petroleum and Energy Studies, Dehradun. One of the video (Practical Windows Registry Expiation), which are available under Creative Commons Licenses, is adopted from Youtube. There is total 6 video lectures and 1 e-text file in this module. The details of the total views of the video lecture by the users is given below.

Logs & Event Analysis

📄 Practical Windows Registry Explanation	945 views by 815 users	–	Friday, 27 August 2021, 5:42 AM (8 mins 33 secs)
📄 Forensic Analysis using AUTOPSY: Linux and Windows	946 views by 815 users	–	Wednesday, 25 August 2021, 11:30 AM (1 day 18 hours)
📄 Forensics and Log analysis	924 views by 816 users	–	Wednesday, 25 August 2021, 11:30 AM (1 day 18 hours)
📄 Compare and AUDIT Evidences using Hashdeep	927 views by 814 users	–	Wednesday, 25 August 2021, 11:30 AM (1 day 18 hours)
📄 Data Carving using Bulk Extractor: Kali Linux and Windows	934 views by 814 users	–	Thursday, 26 August 2021, 9:15 PM (8 hours 35 mins)
📄 Recovering Evidence from Forensic Images using Foremost	920 views by 814 users	–	Thursday, 26 August 2021, 9:31 PM (8 hours 19 mins)
📄 Logs & Event Analysis(e-text)	926 views by 647 users	–	Thursday, 26 August 2021, 9:35 PM (8 hours 15 mins)

The twelfth module is "Application Password Cracking" and the instructor for this module are Mr. Sridhar Chandramohan Iyer, Assistant Professor, Universal College of Engineering, Mumbai and Mr. Rishikesh Ojha. One of the video(Common Password threats), which are available under Creative Commons Licenses, is adopted from Youtube. There is total 6 video lectures and 1 e-text file in this module. The details of the total views of the video lecture by the users is given below.

Application Password Cracking			
Introduction to Password Cracking	924 views by 812 users	-	Thursday, 26 August 2021, 9:36 PM (8 hours 14 mins)
Common Password Threats	902 views by 812 users	-	Wednesday, 25 August 2021, 11:31 AM (1 day 18 hours)
Password Cracking using John the Ripper	895 views by 812 users	-	Wednesday, 25 August 2021, 11:31 AM (1 day 18 hours)
Password Cracking using Rainbow Tables	917 views by 812 users	-	Wednesday, 25 August 2021, 11:31 AM (1 day 18 hours)
PDF File Analysis	907 views by 811 users	-	Wednesday, 25 August 2021, 11:31 AM (1 day 18 hours)
Remote Imaging using E3 Digital Forensics	916 views by 811 users	-	Wednesday, 25 August 2021, 11:31 AM (1 day 18 hours)
Application Password Cracking(e-text)	924 views by 655 users	-	Wednesday, 25 August 2021, 8:03 PM (1 day 9 hours)

The thirteenth module is "Wireless Attacks" and the instructor for this module is Mr. Sridhar Chandramohan Iyer, Assistant Professor, Universal College of Engineering, Mumbai. There is total 1 video lectures and 1 e-text file in this module. The details of the total views of the video lecture by the users is given below.

Wireless Attacks			
WiFi Packet Capture and Password Cracking using Aircrack ng	942 views by 811 users	-	Wednesday, 25 August 2021, 11:31 AM (1 day 18 hours)
Wireless Attacks(e-text)	861 views by 645 users	-	Wednesday, 25 August 2021, 8:05 PM (1 day 9 hours)

The fourteenth module is "Web Attacks" and the instructor for this module is Mr. Sridhar Chandramohan Iyer, Assistant Professor, Universal College of Engineering, Mumbai. There is total 1 video lectures and 1 e-text file in this module. The details of the total views of the video lecture by the users is given below.

Web Attacks			
Introduction to Web Attacks	922 views by 811 users	-	Wednesday, 25 August 2021, 11:31 AM (1 day 18 hours)
Web Attacks(e-text)	874 views by 647 users	-	Wednesday, 25 August 2021, 8:05 PM (1 day 9 hours)

The fifteenth module is "Web Attack Forensics" and the instructor for this module is Mr. Sridhar Chandramohan Iyer, Assistant Professor, Universal College of Engineering, Mumbai. There is total 7 video lectures and 1 e-text file in this module. The details of the total views of the video lecture by the users is given below.

The sixteenth module is "Electronics Mail" There is total 3 video lectures and 1 e-text file in this module. All the videos (Understanding Email Headers, How to analyze headers using MXtoolbox.com and Email Header Analysis), which are available under Creative Commons Licenses, is adopted from Youtube. The e-text for this module is deve,oped by Dr. Sangram Panigrahi, Assistant Professor, Siksha 'O' Anusandhan, Bhubaneswar. The details of the total views of the video lecture by the users is given below.

The seventeenth module is "Investigating E-Mail Attacks" and the instructor for this module is Dr. Akashdeep Bharadwaj, Professor, University of Petroleum and Energy Studies, Dehradun. There is total 1 video lecture and 1 e-text file in this module. The details of the total views of the video lecture by the users is given below.

The eighteenth module is "Mobile Device Forensics" and the instructor for this module are Mr. Sridhar Chandramohan Iyer, Assistant Professor, Universal College of Engineering, Mumbai and Mr. Rishikesh Ojha. There is total 2 video lectures and 1 e-text file in this module. The details of the total views of the video lecture by the users is given below.

Mobile Device Forensics

Mobile Forensics	938 views by 806 users	-	Friday, 27 August 2021, 12:45 AM (5 hours 5 mins)
Preparation for Digital Forensics Investigation	1320 views by 687 users	-	Friday, 27 August 2021, 12:45 AM (5 hours 5 mins)
Mobile Device Forensics(e-text)	979 views by 650 users	-	Thursday, 26 August 2021, 10:43 AM (19 hours 7 mins)

The nineteenth module is "Investigative reports, expert witness and cyber regulations" and the instructor for this module are Mr. Sridhar Chandramohan Iyer, Assistant Professor, Universal College of Engineering, Mumbai and Dr. Akashdeep Bharadwaj, Professor, University of Petroleum and Energy Studies, Dehradun. There is total 2 video lectures and 1 e-text file in this module. The details of the total views of the video lecture by the users is given below.

Investigative reports, expert witness and cyber regulations

Introduction to Report Writing	911 views by 806 users	-	Friday, 27 August 2021, 12:45 AM (5 hours 5 mins)
Forensic Reports & Expert Witness	926 views by 806 users	-	Friday, 27 August 2021, 12:45 AM (5 hours 5 mins)
Investigative reports, expert witness and cyber regulations(e-text)	1033 views by 668 users	-	Thursday, 26 August 2021, 10:43 AM (19 hours 7 mins)

The twentieth module is "Practical Handbook" with contains demonstration video lectures of the various aspects of Digital Forensics. These videos are jointly developed by Mr. Sridhar Chandramohan Iyer, Assistant Professor, Universal College of Engineering, Mumbai, Mr. Rishikesh Ojha, Mr. Ketan Joglekar, Assistant Professor, GJ College, Maharastra. The details of the total views of the video lecture by the users is given below.

Practical Handbook

Practical Handbook	1170 views by 712 users	-	Thursday, 26 August 2021, 10:43 AM (19 hours 7 mins)

Activities Completed by the Participants

Both synchronous and asynchronous activities should incorporate in the online course to encourage the participants to interact with peer group as well teachers. The following table shows the activities such as discussion forum and chat completed by the participants. It is appreciated that the participants were participated the chat which was live activity facilitate to interact with peer and teacher.

Participation in Asynchronous Discussion forum

There are 585 unique threads created by the participants which are answered by mentors, instructors and other participants. The discussion forum has 13,010 views by 953 users.

Discussion Forum	13010 views by 953 users	-	Friday, 27 August 2021, 12:59 AM (4 hours 51 mins)

**Participation in Live Synchronous Discussion forum**

Four live sessions were conducted on:
1. 17th July, 2021 at 18:00 Hrs,

2. 24th July, 2021 at 18:00 Hrs.

3. 31st July, 2021 at 18:00 Hrs, and

4. 7th Aug., 2021 at 18:00 Hrs.

These sessions were conducted through ZOOM sessions and were attended by 250+ participants and the following experts were present online to answer the quarries of the participants.
1. Prof. Durgesh Pant, UOU

2. Dr. Jeetendra Pande, UOU

3. Dr. Akashdeep Bharadwaj

4. Gp. Cap. Ashok Kumar

5. Dr. Sangram Panigrahi

6. Mr. Sridhar Chandramohan Iyer

7. Mr. Rishikesh Ojha

The first live session held on 17th July, 2021 was attended by 250+ participants through ZOOM and the session was broadcasted on Youtube.
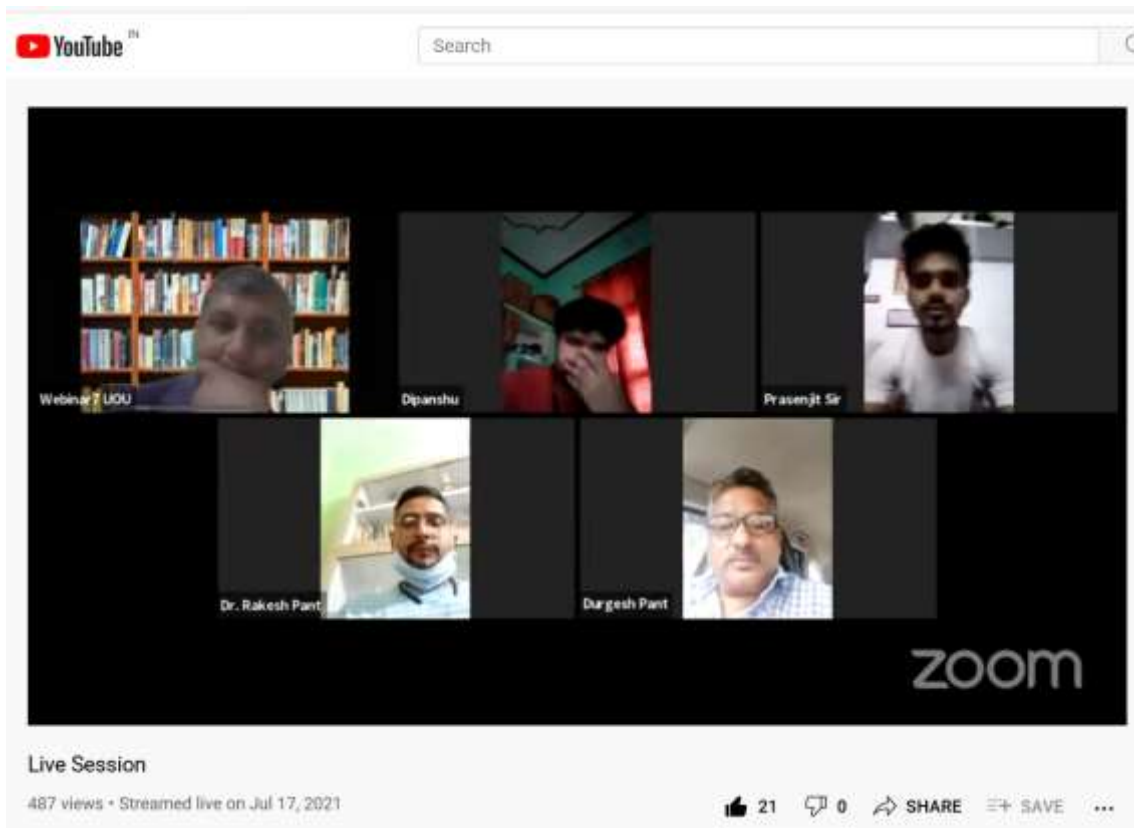
The second live session held on 24th July, 2021 was attended by 100+ participants through ZOOM and the session was broadcasted on Youtube.

The third live session held on 31st July, 2021 was attended by 100+ participants through ZOOM and the session was broadcasted on Youtube.

The fourth live session held on 7th Aug., 2021 was attended by 75+ participants through ZOOM and the session was broadcasted on Youtube.

Webinar7 UOU's Personal Meeting Room
79 views • Streamed live on Aug 7, 2021   👍 6   👎 0   ↗ SHARE   ≡+ SAVE   …

Quizzes

The course has four quizzes and it was mandatory to score 50% or more in all the four quizzes individually in unlimited attempts. The quiz consists of MCQ type of assessment with no negative marking.

S. No.	Quiz	No. of questions	Total time	Max. Score	Min. max to clear the quiz
1	Quiz 1	10	10 mins	10	05
2	Quiz 2	10	10 mins	10	05
3	Quiz 3	10	10 mins	10	05
4	Quiz 4	10	10 mins	10	05

Quiz 1 was released on 17th July, 2021 which has total 7104 views by 875 users. Total number of attempts for Quiz 1 is 1330.

QUIZ 1

☑ Quiz 1   7104 views by 875   Thursday, 26 August 2021, 11:31 AM (20 hours 23
                                        users.   mins)

Digital Forensics

Dashboard / My courses / DF / QUIZ 1 / Quiz 1

Quiz 1

Done: View **To do:** Make attempts: 1 **To do:** Receive a grade **To do:** Receive a pass grade or complete all available attempts

Time limit: 10 mins

Grading method: Highest grade

Grade to pass: 5.00 out of 10.00

Attempts: 1330

Attempt quiz now

Quiz 2 was released on 24th July, 2021 which has total 7097 views by 936 users. Total number of attempts for Quiz 2 is 1341.

QUIZ 2

| Quiz 2 | 7097 views by 936 users | – | Wednesday, 25 August 2021, 11:30 AM (1 day 20 hours) |

Digital Forensics

Dashboard / My courses / DF / QUIZ 2 / Quiz 2

Quiz 2

Done: View **To do:** Make attempts: 1 **To do:** Receive a grade **To do:** Receive a pass grade

Time limit: 10 mins

Grading method: Highest grade

Grade to pass: 5.00 out of 10.00

Attempts: 1341

Attempt quiz now

Quiz 3 was released on 31st July, 2021 which has total 5075 views by 811 users. Total number of attempts for Quiz 3 is 1011.

| Quiz 3 | 5075 views by 811 users | – | Friday, 27 August 2021, 12:43 AM (7 hours 11 mins) |

Digital Forensics

Dashboard / My courses / DF / QUIZ 3 / Quiz 3

Quiz 3 ⚙▾

Done: View **To do:** Make attempts: 1 **To do:** Receive a grade **To do:** Receive a pass grade

Time limit: 10 mins

Grading method: Highest grade

Grade to pass: 5.00 out of 10.00

Attempts: 1011

Attempt quiz now

Quiz 3 ⚙▾

Opened: Monday, 28 June 2021, 12:00 AM

Done: View **To do:** Make attempts: 1 **To do:** Receive a grade **To do:** Receive a pass grade or complete all available attempts

Time limit: 10 mins

Grading method: Highest grade

Grade to pass: 6.00 out of 10.00

Attempts: 513

Attempt quiz now

Quiz 4 was released on 7th Aug., 2021 which has total 5072 views by 804 users. Total number of attempts for Quiz 4 is 1014.

QUIZ 4

| ☑ Quiz 4 | 5072 views by 804 users | - | Friday, 27 August 2021, 12:47 AM (7 hours 8 mins) |

Digital Forensics

Dashboard / My courses / DF / QUIZ 4 / Quiz 4

Quiz 4 ⚙▾

Closed: Sunday, 22 August 2021, 11:59 PM

Done: View **To do:** Receive a grade **To do:** Receive a pass grade

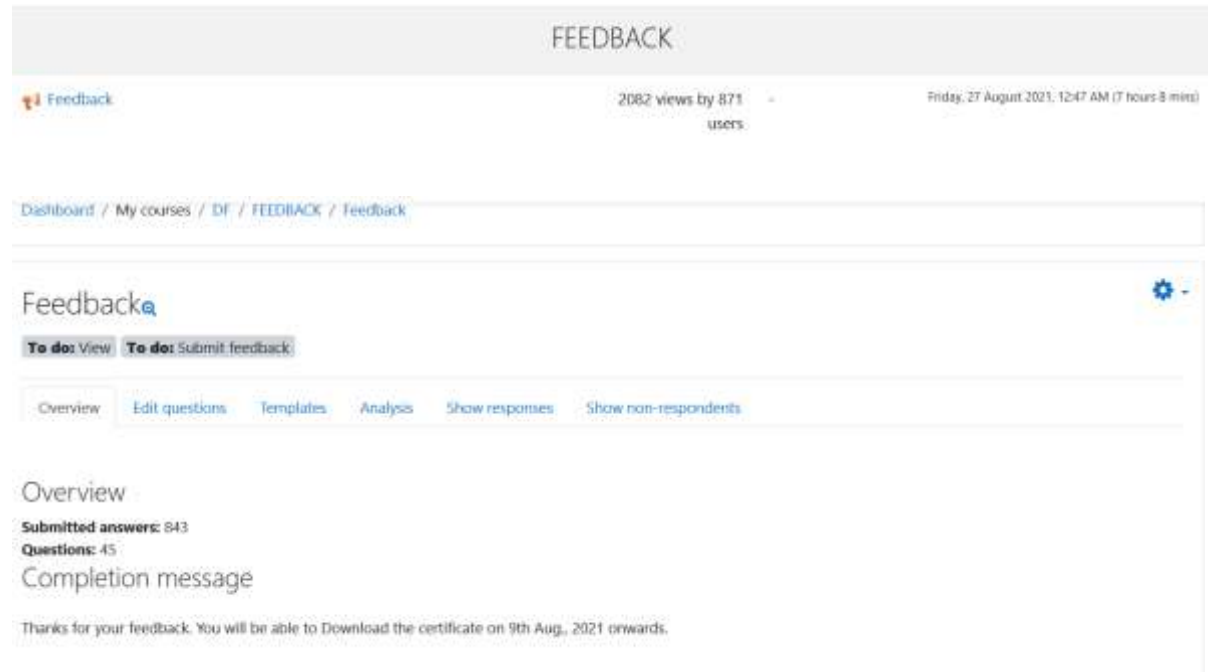Time limit: 10 mins

Grading method: Highest grade

Grade to pass: 5.00 out of 10.00

Attempts: 1014

Back to the course

Feedback

After the completion of the online training program on Digital Forensics, all the participants have to fill the feedback form. The Course Feedback activity was viewed 2082 times by 871 users and the feedback form was filled by 843 participants.

Out of total 843 respondents, 575 (68.21 %) participants are Male and 268 (31.79 %) are Female. Interestingly the course has nearly equal representation from Male and Female.
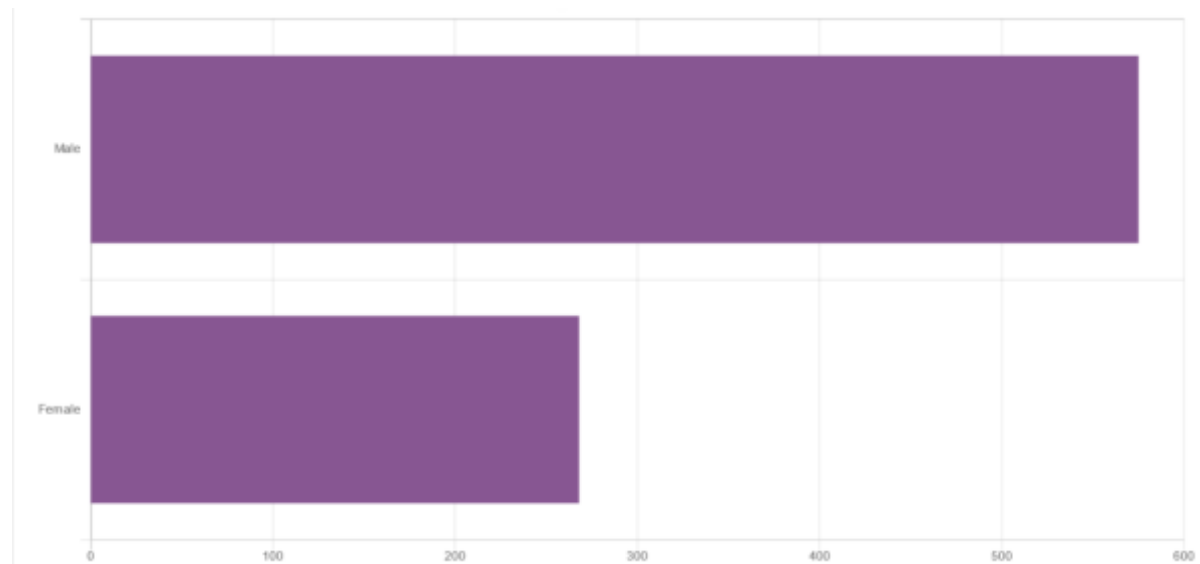
Most of the respondents were form India 825 (97.86 %). Interestingly there are 18 (2.14 %) respondents outside India.
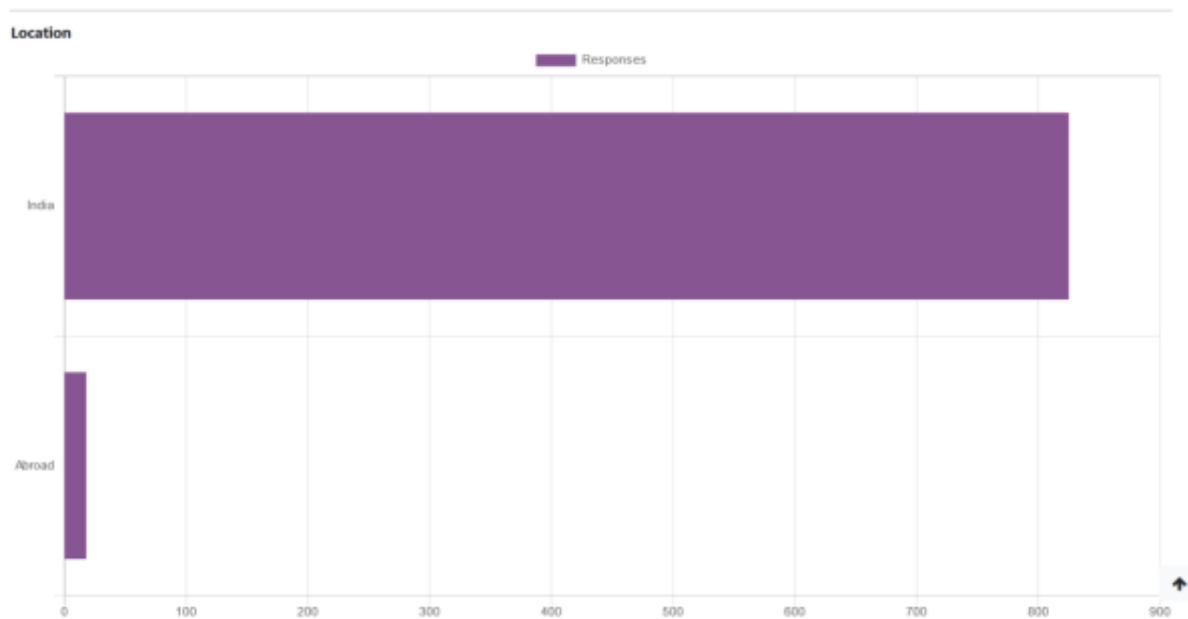
The survey has respondents from almost all the States and Union Teritories except Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Sikkim, Tripura, Andaman & Nicobar Island, Dadra and Nagar Haveli and Daman and Diu, Ladakh and Lakshdweep . The details of the representation from each Indian States and Union Teritories are as follows:

Andhra Pradesh	18 (2.14 %)
Arunachal Pradesh	0
Assam	3 (0.36 %)
Bihar	13 (1.54 %)
Chhattisgarh	3 (0.36 %)
Goa	1 (0.12 %)
Gujarat	13 (1.54 %)
Haryana	7 (0.83 %)
Himachal Pradesh	4 (0.47 %)
Jharkhand	2 (0.24 %)
Karnataka	20 (2.37 %)
Kerala	37 (4.39 %)
Madhya Pradesh	5 (0.59 %)
Maharashtra	48 (5.69 %)
Manipur	0
Meghalaya	0
Mizoram	0
Nagaland	1 (0.12 %)
Odisha	9 (1.07 %)
Punjab	8 (0.95 %)
Rajasthan	16 (1.90 %)

Sikkim	0
Tamil Nadu	358 (42.47 %)
Telangana	21 (2.49 %)
Tripura	0
Uttar Pradesh	48 (5.69 %)
Uttarakhand	138 (16.37 %)
West Bengal	24 (2.85 %)
Andaman and Nicobar Island	0
Chandigarh	1 (0.12 %)
Dadra and Nagar Haveli and Daman and Diu	0
Delhi	22 (2.61 %)
Ladakh	0
Lakshadweep	0
Jammu and Kashmir	4 (0.47 %)
Puducherry	2 (0.24 %)
Others	17 (2.02 %)
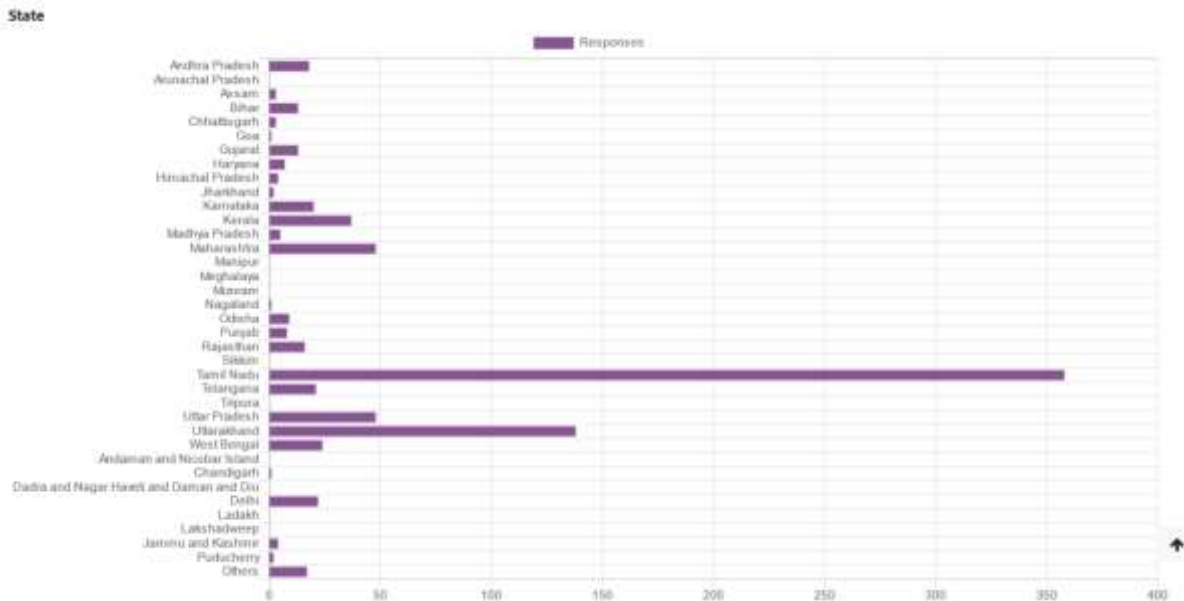
The data revealed that most of the respondents 441 (52.31 %) are in the age group under 17 to 24, while about one forth 203 (24.08 %) are between 25 to 34 age group, followed by 136 (16.13 %) respondents from 35 to 44 age group. 45 to 54 age group have 54 (6.41 %) respondents. Interestingly there is only 6 (0.71 %) respondents from 55 to 64 age group and 3 (0.36 %) for below 17 age group. There is no participation from above 65 age group.

You are in the age group of:
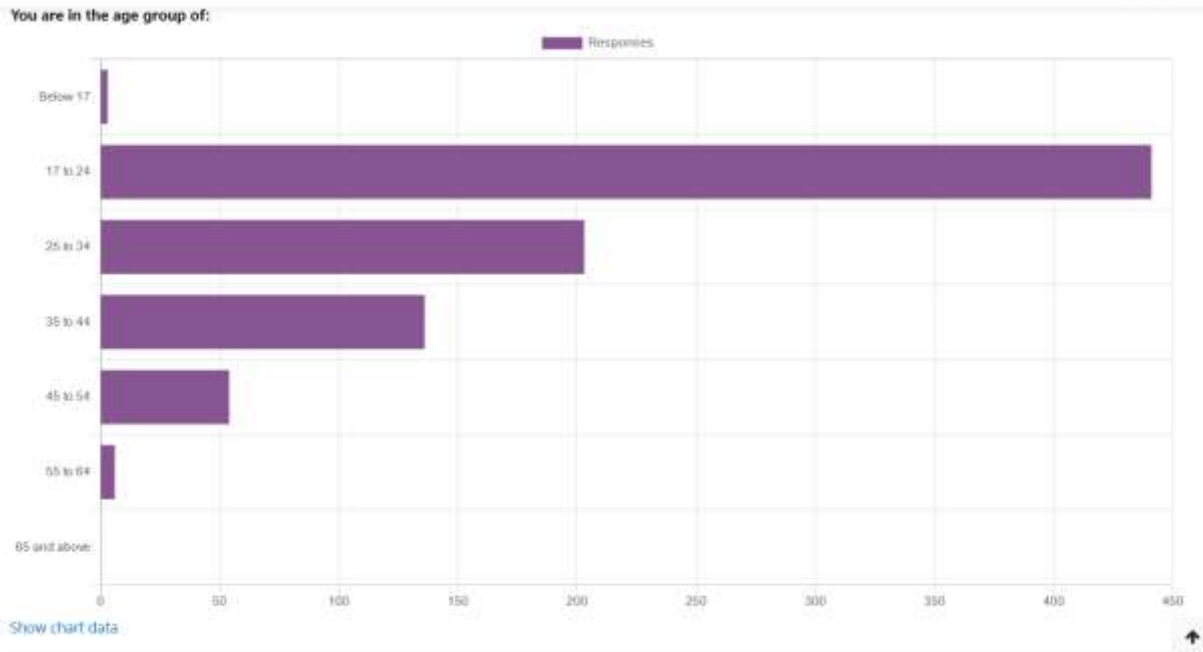

The data revealed that more than half of the respondents 452 (53.62 %) were from Science & Technology discipline, while 246 (29.18 %) of them were from Commerce. Humanities discipline is covered by only 37 (4.39 %) respondents. The least number of respondents 18 (2.14 %) are from Languages. There are 90 (10.68 %) respondents from Others discipline.

Your subject specialization is ?

Reason you are taking this course?
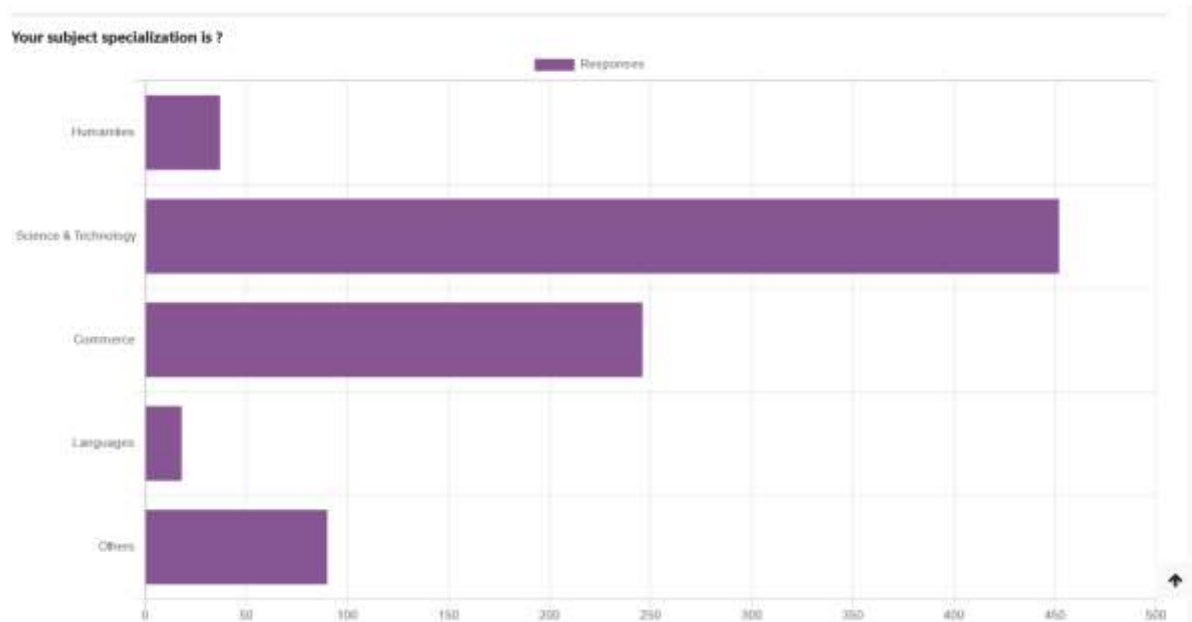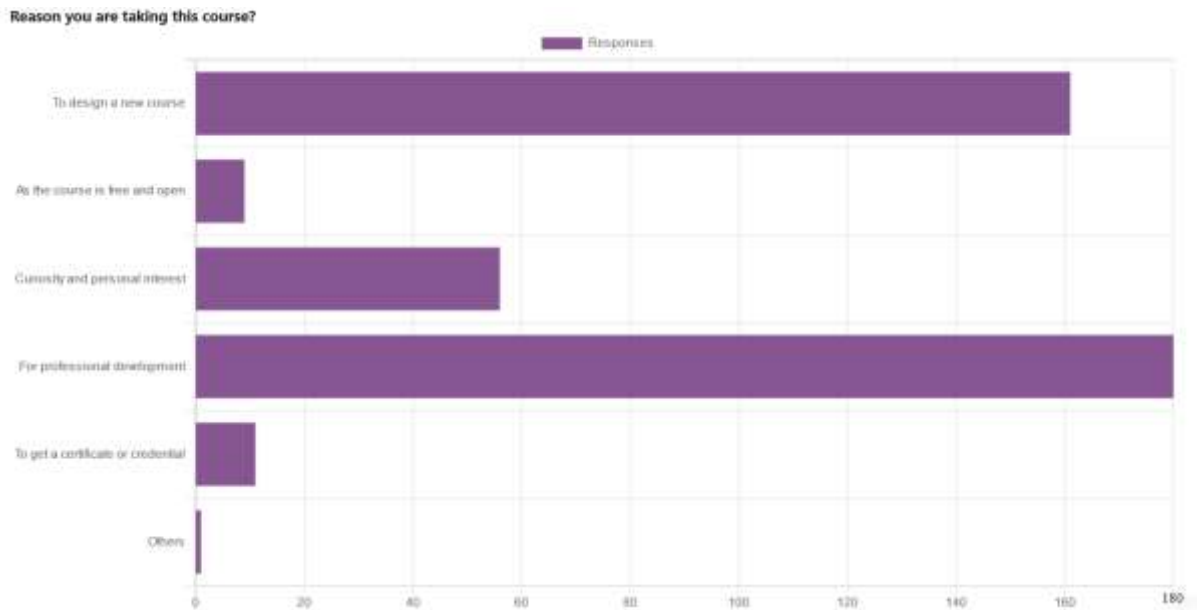
The respondents were not only the students 548 (65.01 %), but Faculty Members 161(19.10 %), Government Officers 39(4.63 %) and Educational Administrators7(0.83 %). There is a good number of un-affiliated 88(10.44 %) respondents also.

You are a:
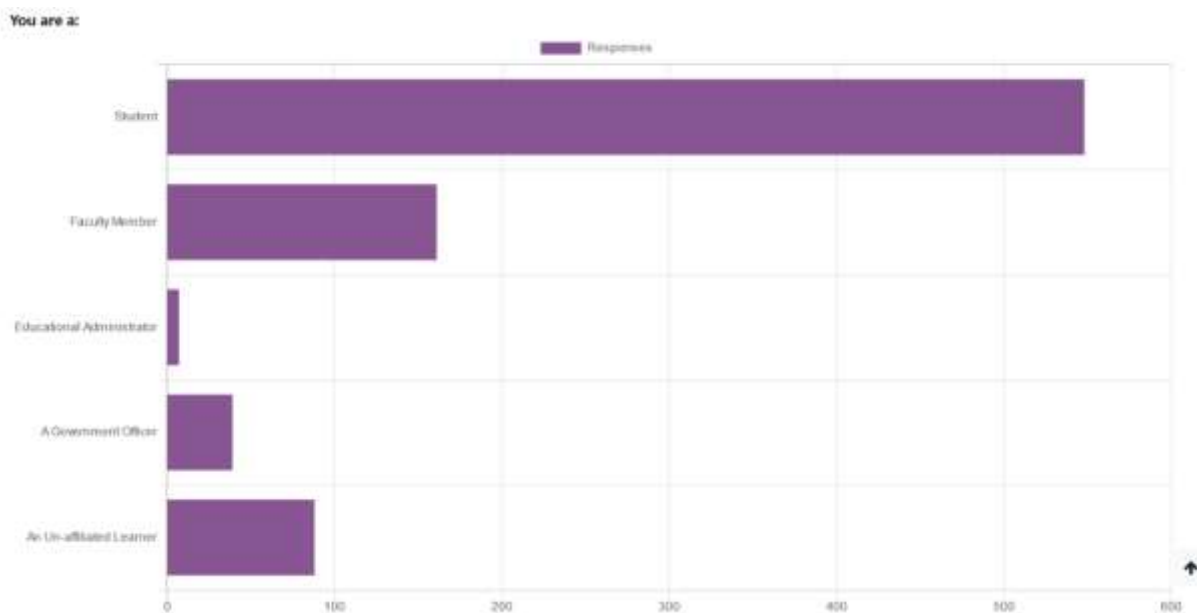
The respondents were asked questions related to the Instructor to Learner Interaction, Instructor Support, Instructor Feedback, Learner to Learner Interaction, Course Content, Course Structure, Information Delivery Technology, Perceived Effectiveness and Learner Retention of the online training program on Digital Forensics and the item were measure the analysed on 5-point scale from 1 for strongly disagree, 2 for disagree, 3 for neutral, 4 for agree, and 5 for

strongly agree. The questioner is adopted from "Exploring the factors affecting MOOC retention: A survey study[1]" which is available under a Creative Commons license.

S. No.	Items	Total	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Average
1	I felt free to ask questions throughout this course	843	58%	38%	2%	0%	1%	4.53
2	The instructor responded to my questions in a timely manner	843	56%	39%	4%	0%	1%	4.48
3	The instructor was easily accessible to me	843	55%	40%	4%	0%	1%	4.47
4	I felt free to express and explain my own views throughout this course	843	56%	39%	4%	0%	1%	4.49
5	The instructor played an important role in facilitating learning in this course	843	62%	35%	1%	1%	1%	4.58
6	The instructor contributed to the discussions in this course	843	58%	38%	3%	0%	1%	4.52
7	The instructor was actively helpful when students had problems	843	56%	38%	4%	1%	1%	4.48
8	I have interacted with the instructor in this course	843	46%	41%	9%	3%	1%	4.27
9	The instructor emphasized relationships between and among topics	843	54%	41%	4%	0%	1%	4.47
10	The instructor was responsive to student concerns	843	54%	41%	3%	0%	1%	4.47
11	The instructor provided timely feedback on assignments, exams or projects	843	55%	40%	4%	1%	1%	4.47

[1] Kate S. Hone, Ghada R. El Said, Exploring the factors affecting MOOC retention: A survey study, Computers & Education, Volume 98, 2016, Pages 157-168,

12	The instructor provided helpful timely feedback on assignments, exams or projects	843	54%	40%	5%	1%	1%	4.47
13	I felt as if the instructor cared about my individual learning on this course	843	51%	41%	5%	1%	1%	4.41
14	The group work contributed significantly to this course	843	49%	41%	8%	1%	1%	4.35
15	Group size was appropriate for course purposes	843	46%	42%	9%	2%	1%	4.30
16	Student interaction was an important learning component of this course	843	53%	41%	5%	1%	1%	4.43
17	This course provided an opportunity to learn from other students	843	51%	39%	7%	2%	1%	4.37
18	I had sufficient opportunity to interact with other students on this course	843	47%	42%	8%	2%	1%	4.31
19	This course effectively challenged me to think	843	59%	37%	2%	1%	1%	4.52
20	Course assignments were interesting and stimulating	843	57%	38%	3%	1%	1%	4.51
21	This course was up-to-date with developments in the field	843	57%	38%	3%	1%	1%	4.48
22	Student evaluation techniques such as projects, assignments, and exams were related to the learning objectives of this course.	843	56%	40%	2%	1%	1%	4.48
23	This course included applied learning and problem solving	843	55%	41%	2%	1%	1%	4.48
24	The structure of the modules was well prepared and organized	843	60%	37%	1%	2%	1%	4.53

25	Projects/assignments were clearly explained	843	55%	40%	3%	1%	1%	4.47
26	I understood what was expected of me	843	55%	41%	2%	1%	1%	4.50
27	The interactive content of this course was effectively communicated	843	56%	40%	3%	1%	1%	4.49
28	The interactive content of this course included information not covered in printed material of the same course	843	46%	41%	8%	3%	2%	4.27
29	The interactive content of this course contributed towards learning	843	56%	39%	3%	1%	1%	4.49
30	I have learned a lot in this course	843	63%	33%	2%	1%	1%	4.57
31	I would recommend this course to friends/colleagues	843	62%	35%	1%	1%	1%	4.57
32	I have enjoyed taking this course	843	63%	35%	1%	0%	1%	4.58

The average responses of the respondents follow between 4.58 to 4.27 which indicated positive agreement of them towards the items related to Instructor to Learner Interaction, Instructor Support, Instructor Feedback, Learner to Learner Interaction, Course Content, Course Structure, Information Delivery Technology, Perceived Effectiveness and Learner Retention.

Instructor to Learner Interaction
The average responses of the respondents follow between 4.47 to 4.53 which indicated positive agreement of them towards the items related to Instructor to Learner Interaction. Most of the respondents reported that they felt free to ask questions throughout this course (Avg: 4.53). They reported positively in response to the question where they were asked about the timely response of the instructor responded to their questions (Avg: 4.48). They agreed that the instructor was easily accessible to them (Avg: 4.47). They also felt free to express and explain their own views throughout this course (Avg: 4.49).

Instructor Support
The average responses of the respondents follow between 4.27 to 4.58 for the items related to Instructor Support. They agreed that the instructor played an important role in facilitating learning in this course (Avg: 4.58). They also reported positively to the item which enquired about the instructor contributed to the discussions in this course (Avg: 4.52). They also reported that the instructor was actively helpful when students had problems (Avg: 4.48). Most of the

respondents have interacted with the instructor in this course (Avg: 4.27). They also reported that the instructor emphasized relationships between and among topics (Avg: 4.47).

Instructor Feedback

The average responses of the respondents follow between 4.47 to 4.41 for the items related to Instructor Feedback. They reported positively that the instructor was responsive to student concerns (Avg: 4.47). They also reported positively that the instructor provided timely feedback on assignments, exams or projects (Avg: 4.47). Similarly, the instructor provided helpful timely feedback on assignments, exams or projects (Avg: 4.47). Additionally, respondents admitted that they felt as if the instructor cared about their individual learning on this course (Avg: 4.41).

Learner to Learner Interaction

The average responses of the respondents follow between 4.30 to 4.43 for the items related to Learner-to-Learner Interaction. The participants agreed that the group work contributed significantly to this course (Avg: 4.35). They also felt that Group size was appropriate for course purposes (Avg: 4.30). The respondents admitted that Student interaction was an important learning component of this course (Avg: 4.43). The respondents accepted that this course provided an opportunity to learn from other students (Avg: 4.37). Similarly, they had sufficient opportunity to interact with other students on this course (Avg: 4.31).

Course Content

The average responses of the respondents follow between 4.52 to 4.48 for the items related to Course Content. Most of the respondents felt that this course effectively challenged me to think (Avg: 4.52). They also reported positively that course assignments were interesting and stimulating (Avg: 4.51). They admitted that this course was up-to-date with developments in the field (Avg: 4.48). The also accepted that Student evaluation techniques such as projects, assignments, and exams were related to the learning objectives of this course (Avg: 4.48). They also agreed that this course included applied learning and problem solving (Avg: 4.48).

Course Structure

The average responses of the respondents follow between 4.47 to 4.53 for the items related to Course Structure. Most of the respondents reported that the structure of the modules was well prepared and organized (Avg: 4.53). That also admitted that the projects/assignments were clearly explained (Avg: 4.47). They also understood what was expected of them (Avg: 4.50).

Information Delivery Technology

The average responses of the respondents follow between 4.27 to 4.49 for the items related to Information Delivery Technology. The respondents reported that the interactive content of this course was effectively communicated (Avg: 4.49). They also accepted that the interactive content of this course included information not covered in printed material of the same course (Avg: 4.27). Additionally, they also agreed that the interactive content of this course contributed towards learning (Avg: 4.49).

Perceived Effectiveness

The average responses of the respondents follow between 4.57 to 4.58 for the items related to Perceived Effectiveness. They agreed that they have learned a lot in this course (Avg: 4.57). The respondents were also willing to recommend this course to friends/colleagues (Avg: 4.57). Most of the respondents accepted that they have enjoyed taking this course (Avg: 4.58)

Out of total 843 respondents, 770 (91.34 %) reported that they completed the MOOC to earn a credential signifying official completion.

Question	Yes	No
Did you complete the MOOC to earn a credential signifying official completion?	770 (91.34 %)	73 (8.66 %)

Out of the respondents who dropped the course, 47 (5.58 %) respondents reported that they dropped the course within first few days, 25 (2.97 %) of them dropped within first few weeks, 30 (3.56 %) towards the middle of the course, 28 (3.32 %) towards the end of the course and 40 (4.74 %) respondents dropped the course just before the end.

Question	Not applicable, as I officially completed the course	First few days	First few week	Towards the middle	Towards the end	Just before the end
If no, when did you drop out?	673 (79.83 %)	47 (5.58 %)	25 (2.97 %)	30 (3.56 %)	28 (3.32 %)	40 (4.74 %)

692 (82.09 %) respondents completed all the exercises/assessments in the MOOC, 91(10.79 %) completed most of the exercises/assessments, 17(2.02 %) completed almost half, 30(3.56 %) respondents completed a few exercises/assessments and 13(1.54 %) participants reported that they not completed none of the exercises/assessments in the MOOC.

Question	All	Most	Around Half	A few	None
How many exercises/assessments did you complete in the MOOC?	692 (82.09 %)	91 (10.79 %)	17 (2.02 %)	30 (3.56 %)	13 (1.54 %)

In response to the item "How much of the MOOC content do you estimate you watched or read?", 618 (73.31 %) respondents reported that they have watched/ read all the contents of the MOOC, 167(19.81 %) reported they watched/ read most the contents, 30(3.56 %)

reported around half, 23(2.73 %) reported a few and 5 (0.59 %) respondents reported that they have watched/ read none the contents of the MOOC.

Question	All	Most	Around Half	A few	None
How much of the MOOC content do you estimate you watched or read?	618 (73.31 %)	167 (19.81 %)	30 (3.56 %)	23 (2.73 %)	5 (0.59 %)

After completing all the mandatory requirements for successfully completing the online training program, 788 participants downloaded the certificate.

Digital Forensics
Dashboard / My courses / DF / General / Download Certificate

Download Certificate
View certificate
Recipients: 788

ADVISORS

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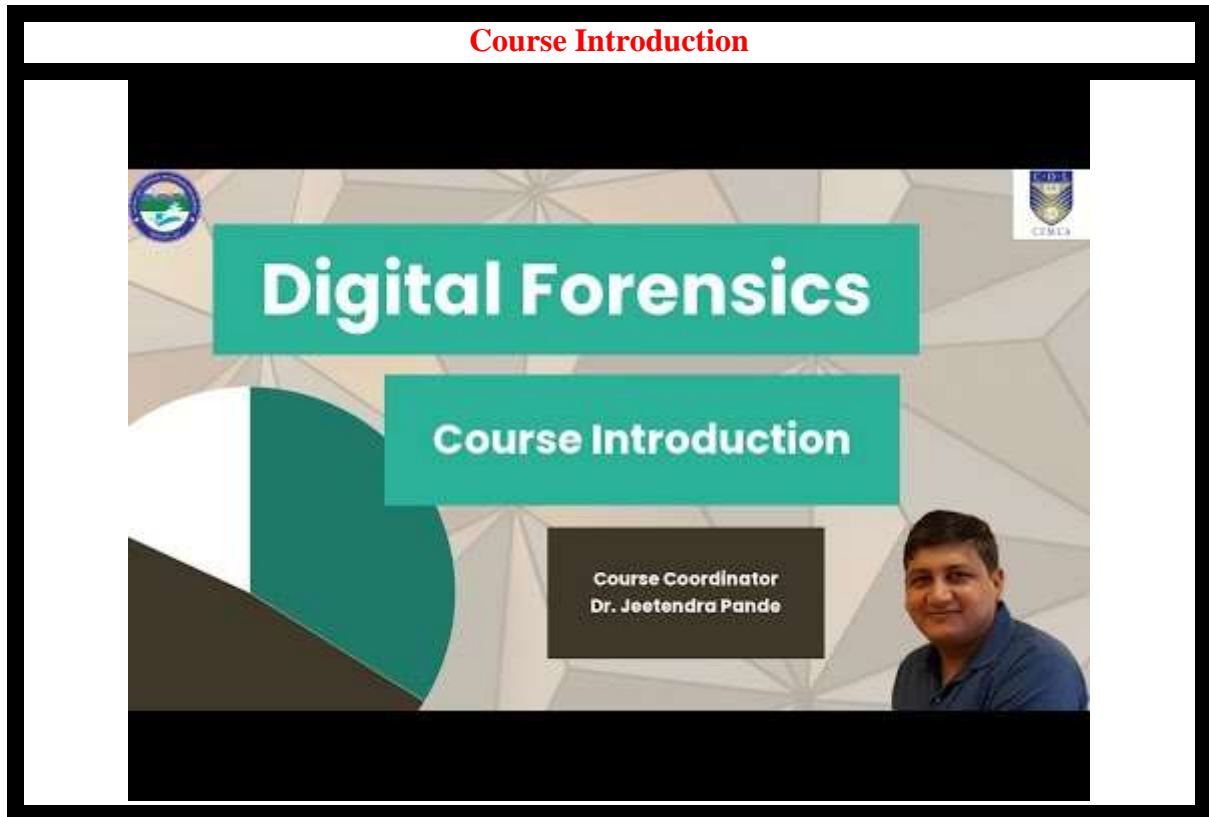

Dr. Ashutosh Kumar Bhatt, Associate Professor, Uttarakhand Open University, Haldwani

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Course starts from 12 July,2021. The exact dates shall be communicated to registered participants

COURSE FEE

Free

COURSE START DATE

12 July, 2021

COURSE REGISTRATION LINK

https://forms.gle/b68DA6wikJJc5xuE9

This MOOC has been prepared with the support of

CEMCA