Course Code: CSE4708	**Course Name:** Cyber Forensics	
Credits: 3 (3-0-0)	**Contact Hours:** 3 hours Theory per week	
Batch: 2021, 7th Sem **Academic Year:** 2024-25	**Semester Duration:** 5th Aug 2024 to 6th Dec	
Course Faculty: Dr. Pramod Kumar Maurya [*contact details: pramod.maurya@bmu.edu.in, 9643322724 and 7*, IV Floor, E2 Building]	**Course Coordinator:** **Name:** Dr. Pramod Kumar Maurya **Email:** *pramod.maurya@bmu.edu.in* **Office: 7**, IV Floor, E2 Building	

Aim of the course: The goal of this course "Cyber Forensics" is to understand the principles and practice of security attacks and fundamentals of security protocols and its defense. It covers operating system security, database security, network-based security threats and their social and legal aspect.

Course Overview and Context: Cyber Forensics is a core elective course in computer science and engineering and computer science undergraduate program. This course focuses on to understand Computer Forensics, Computing Investigations, Enforcement Agency Investigations. This course will provide overview of types of computer forensics, data recovery, electronic evidence, threats, surveillance.

Course Outcomes (CO): At the end of the course the students should be able to do the following:

CO1 Understand a brief overview of Computer Forensics Fundamentals.

CO2 Identify the features of Data Recovery.

CO3 Understanding of Reconstructing Past Events.

CO4 Work with cyber forensics tools.

Topics of the course:

Topics	Number of sessions	Course Outcomes
Computer Forensics Fundamentals.	3	CO1
Types of Computer Forensics Technology	3	CO1
Types of Vendor and Computer Forensics Services.	2	CO1
Data Recovery	2	CO2
Evidence Collection and Data Seizure	3	CO2
Duplication and Preservation of Digital Evidence	2	CO3

Computer Image Verification and Authentication.	2	CO2
Discover of Electronic Evidence	2	CO3
Identification of Data	2	CO3
Reconstructing Past Events	3	CO3
Networks.	2	CO3
Fighting against Macro Threats	1	CO2
Information Warfare Arsenal	2	CO3
Tactics of the Military	2	CO4
Tactics of Terrorist and Rogues	2	CO3
Tactics of Private Companies.	2	CO4
The Future – Arsenal	2	CO3
Surveillance Tools	2	CO4
Victims and Refugees	1	CO4
Advanced Computer Forensics.	2	CO4
Payload, Key Management	2	CO4

Learning Resources:

Textbook:

John R. Vacca, "Computer Forensics", Firewall Media, 2004.

Reference Books:

1. Chad Steel, "Windows Forensics", Wiley India, 2006.

2. Majid Yar, "Cybercrime and Society", Sage Publications, 2006.

3. Robert M Slade, "Software Forensics", Tata McGraw Hill, 2004

Assessment Pattern: The final grade will be based on the marks / grades obtained in the mid-semester and end-semester evaluation along with other assessments defined below. Relative grading method defined in the academic regulations of the university will be followed to grade the students. Student has to secure minimum 40% of marks after completing all the assessments in the following table to become eligible for grading.

Evaluation Component	Weightage (%)	Evaluation Schedule	Rubrics
Mid Term	20%	As per academic calendar/Date-sheet	Close book written exam
Quiz 1	10%	September 2nd Week	Topics to be covered will be announced in the class. 10 MCQ questions, each of 1 mark. Mode of quiz will be offline.
Assignment 1	10%	October 2nd week	Topics to be covered will be announced in the class.
Case Study and Literature Survey	20%	November 2nd and 3rd week	Viva (5%) Presentation (15 %)
End Term	40%	As per academic calendar / Date-sheet	Close book written exam

- All evaluations will be based on the work presented by the students as well as the questions asked.
- Cases of AI-generated answer or plagiarism will be taken seriously and reported according to the university's policy on Unfair Means (UFM). It is essential that all work is original and adheres to academic integrity.

Student Responsibilities:

- Attend lectures and do the work Lab Assignments as per instructions.
- Participate in the discussions/assignments held during classes.
- Check announcements on the LMS and emails regularly.
- Submit the assigned task on time.
- Regularly check marks on the LMS to ensure they are up to date.
- Participate in class and take necessary actions to grasp the material. Asking questions is encouraged.
- Communicate any concerns by speaking directly with the instructor.

Attendance Policy: Students are expected to attend classes regularly. Failure to follow the classes regularly and adhere to the expected attendance percentage will result in losing quiz/lab marks and a reduction of the grade as per the University's grading policy.

Recourse Examination Policy: In case a student fails the course, a one-time recourse is permitted as per the academic regulations of the University. Recourse is allowed only for the End Semester examination.
Make-up policy: No make-up exam will be conducted for unexcused absences. The faculty needs to be informed in advance in case the student is not going to appear for any evaluation component, and it is at the discretion of the faculty to sanction makeup for an evaluation component.
Behavior Expectations: No mobile phones and other distractive gadgets are permitted in the class.
Academic Dishonesty/Cheating/Plagiarism: Plagiarism and dishonesty in any form in any evaluation component will lead to appropriate disciplinary action.