Course Code	Course Title	L	T	P	C
OLMCA609	Cyber Forensics	3	1	0	4
Pre-requisite	NIL	Syllabus version			
		1.0			

Course Objectives:

1. To understand the basics of cybercrimes, cyber forensics, and anti-forensics
2. To practice tools for various cyber forensics
3. To acquire real time crimes and investigations with the help of case studies

Course Outcomes:

1. Understand the effects of cybercrimes, the importance of cyber forensics and anti-forensics
2. Interpret and practice the tools for malware, web attack, SSD, and bitcoin forensics
3. Describe the cyber warfare, investigations and to document the plan
4. Infer the principles behind forensic tools and evidences
5. Attentive about various cybercrimes and cyber laws in India

Module:1	Introduction

Fundamentals - Forensics Investigation Process – Standards and Guidelines – Cybercrimes – Types of Cybercrimes – Challenges in Cyber Forensics – Case Studies – Forensics for Windows, Linux and Mac

Module:2	Anti-Forensics

Anti-Forensics – Practices – Data Wiping and Shredding – Data Hiding – Anti Forensics Detection Techniques – Network Forensics – Mobile Forensics – Cloud Forensics – Case Studies

Module:3	Malware and Web Attack Forensics

Malware Forensics – Malware Analysis and Tools – Case Studies – Web Attack Forensics – Email Crimes – Email Forensics

Module:4	SSD and Bitcoin Forensics

Solid State Devices Forensics – Components – Concepts – Data Wiping – Milestones – Case Studies – Bitcoin Forensics – Cryptocurrency – Bitcoin – Crimes – Challenges – Tracking – Case Studies

Module:5	Cyber Laws

Cyber Warfare – Cyber Law – Challenges – Roles – Recommendations – Case Studies – Investigative Reports – Purpose – Writing – Structure – Plan – Conclusion – Characteristics – Document Design

Module:6	Cyber Forensics - The Present and the Future

Forensic Tools and Types - Cyber Forensic Suite - Preliminaries of Electronic or Digital Evidence - Acquisition and Seizure of Evidence - Chain of Custody and Digital Evidence Collection Form – Acquisition of Evidences

Module:7	Case Studies

Cybercrime: Cybercrime against Individual - Cybercrime against Property - Cybercrime against Nation – Cyberlaws in India: Information Technology Act 2000 - Cyber Laws for Cyber Security - Indian Laws Related to Intellectual Property - Indian Case Laws

	Total Lecture hours:	**120 hours**

Text Book(s)

1.	Practical Cyber Forensics – An Incident-Based Approach to Forensic Investigations, Niranjan Reddy, Apress, 2019			
2.	Cyber Forensics, Dejey & S Murugan, Oxford University Press, 2018			
Reference Books				
1.	Cyber Forensics: A Field Manual for Collecting, Examining, and Preserving Evidence of Computer Crimes, Second Edition, Albert Marcella Jr., Doug Menendez, Auerbach Publications			
2.	Cyber Forensics in India: A Legal Perspective, Nishesh Sharma, 2017			
Mode of Evaluation: Quiz / Assignment / Mid-Term, FAT				
Recommended by Board of Studies	01-11-2023			
Approved by Academic Council	No. 72	Date:	13-12-2023	