Course Name	DIGITAL FORENSICS		Course Code	ITEC-435		
Credit Hours	3		Contact Hours	Lec	Lab	Total
				2	2	4
Offered as	☐ University Requirement ☐ College Requirement ☒ Program Requirement ☐ Core ☒ Elective ☒ ITEC ☐ COMP ☐ CNET					
Level	8		Prerequisite	ITEC331		

Course Description:

This course introduces the fundamental concepts of computer forensics and its applications in digital investigations. Students will learn the principles and techniques necessary for effective digital crime scene investigations, including the use of specialized software tools essential for conducting forensic analysis. The curriculum covers the various phases of the digital investigation process, from initial system preservation to event reconstruction, and emphasizes the creation and implementation of an incident response plan. Practical lab exercises will enable students to conduct live investigations, focusing on evidence acquisition, examination, analysis, and preservation. Additionally, the course explores state-of-the-art techniques in digital investigation analysis, such as file carving, multimedia forensics, and memory analysis. Topics on mobile device forensics, anti-forensics, counter anti-forensics, and log analysis will also be included to enhance students' investigative skills and prepare them for real-world challenges in the field.

Upon completion, the student will be able to:

- Have understanding of digital forensics principles and their applications in investigations.
- Explore the stages of the digital forensics process, from evidence identification to presentation.
- Examine the legal frameworks governing cybercrime and digital evidence collection.
- Develop skills in effective methods for collecting and preserving digital evidence.
- Analyze the unique challenges associated with mobile and embedded forensics.
- Become familiar with advanced tools and technologies used in digital forensic investigations.
- Identify and implement best practices for maintaining the integrity of digital evidence.
- Explore emerging trends and future directions in the field of digital forensics

Assessment Methods						
	☒ **Exam-1**	**15%**	☒ **Assignment-1**	**10%**	☒ **Assignment-2**	**15%**
	☒ **Attendance**	**-**	☒ **Lab Exam/ Case Study**	**20%**	☒ **Final Exam**	**40%**

Text Book:

- Digital Forensics, Mr. R. Thyagarajan, Head, Admn. & Finance and Acting Director, CEMCA Dr. Manas Ranjan Panigrahi, Program Officer(Education), CEMCA Prof. Durgesh Pant, Director-SCS&IT, UOU, Editor Er. Gopesh Pande, Network Engineer, Wipro Infotech, Mumbai ISBN: 978-93-84813-94-9.
- Introductory Computer Forensics: A Hands-on Practical Approach, by X. Lin, Springer, 2018, ISBN-10: 3030005801, ISBN-13: 978-3030005801

Reference Books:

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