COURSE FILE

Faculty Details

Name of the Faculty	ASIR ANTONY GNANA SINGH D
Designation	TEACHING FELLOW
Department	IT

Course Details

Name of the Programme	B. Tech IT	Batch	2015-2019
Semester & Year	VIII & IV	No. of Students	52
Subject Code & Name	CS6004 -CYBER FORENSICS		

PROGRAMME EDUCATIONAL OBJECTIVES (PEO's)

PEO-1 Provide proficiency in technical knowledge to responsibly and critically analyze to solve the technological problems

PEO-2 Motivate research and development activities to develop novel products and provide sustainable solutions to meet the societal needs

PEO-3 Provide high professionalism to work in diverse and innovative environments with Modern tools

PEO-4 Develop ethical attitude, provide communication and managerial skills, and induce the ability for life-long learning.

PROGRAMME OUTCOMES (PO's)

PO1: Apply the knowledge of mathematics, science, and engineering.

PO2: Analyze, design, implement and evaluate a computer-based product to meet desired need.

PO3: Demonstrate technical competency in information technology with environmental consideration.

PO4: Identify requirements, formulate, analyze and provide sustainable solutions for technological problems.

PO5: Conduct the experiment and evaluate the results for providing valid conclusions.

PO6: Communicate and Function effectively as an individual and as a part of diverse groups.

PO7: Recognize the recent technological changes to effectively meet the present needs by independent and lifelong learning.

PO8: Apply ethical principles and professionalism in engineering practice to solve the societal, health, safety, legal, and cultural issues in the global environment.

PO9: Conduct the research and development activities to develop the innovative products for satisfying the societal needs.

PO10: Play different roles in project development and participate in multidisciplinary teams.

PO11: Enhance the necessary skills with the available resources for life-long learning.

PO12: Design documentation and make effective reports, effective presentations about the developed product or project.

SYLLABUS

UNIT I NETWORK LAYER SECURITY &TRANSPORT LAYER SECURITY 9

IPSec Protocol - IP Authentication Header - IP ESP - Key Management Protocol for IPSec.Transport layer Security: SSL protocol, Cryptographic Computations – TLS Protocol.

UNIT II E-MAIL SECURITY & FIREWALLS 9

PGP - S/MIME - Internet Firewalls for Trusted System: Roles of Firewalls – Firewall related terminology- Types of Firewalls - Firewall designs - SET for E-Commerce Transactions.

UNIT III INTRODUCTION TO COMPUTER FORENSICS 9

Introduction to Traditional Computer Crime, Traditional problems associated with Computer Crime. Introduction to Identity Theft & Identity Fraud. Types of CF techniques - Incident and

incident response methodology - Forensic duplication and investigation. Preparation for IR: Creating response tool kit and IR team. - Forensics Technology and Systems - Understanding Computer Investigation – Data Acquisition.

UNIT IV EVIDENCE COLLECTION AND FORENSICS TOOLS 9

Processing Crime and Incident Scenes – Working with Windows and DOS Systems. Current Computer Forensics Tools: Software/ Hardware Tools.

UNIT V ANALYSIS AND VALIDATION 9

Validating Forensics Data – Data Hiding Techniques – Performing Remote Acquisition – Network Forensics – Email Investigations – Cell Phone and Mobile Devices Forensics.

COURSE OBJECTIVES & OUTCOMES

COURSE OBJECTIVES

The student should be made to:
- Learn the security issues network layer and transport layer.

- Be exposed to security issues of the application layer.

- Learn computer forensics.

- Be familiar with forensics tools.

- Learn to analyze and validate forensics data.

COURSE OUTCOMES

Upon completion of the course, the student should be able to:

- Discuss the security issues network layer and transport layer.

- Apply security principles in the application layer.

- Explain computer forensics.

- Use forensics tools.

- Analyze and validate forensics data.

Mapping CO – PO:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	A	C		C				A				
CO2	A	C		B				A				
CO3	B	C						A				
CO4	A	B		B				A				
CO5	A	B		B				A				

A – Excellent ; B – Good ; C - Average

Signature of the Faculty

Signature of the Head of the Department

Date:

Date:

METHOD OF EVALUATION AND INNOVATION

Name of the Faculty	D. ASIR ANTONY GNANA SINGH		
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Name of the Programme	B. Tech IT	Batch	2015-2019
Semester & Year	VIII & IV	No. of Students	49
Subject Code & Name	CS6004 -CYBER FORENSICS		

1. METHOD OF EVALUATION

1.1	Continuous Assessment Examinations (CAE 1, CAE 2, CAE 3)
1.2	Assignments / Seminars
1.3	Discussions on various techniques

1.4	Term End Examination
1.5	Others

2. List out any new topic(s) you would like to introduce in teaching the subject in this semester.

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INSTRUCTIONAL OBJECTIVES:

1. **Teaching Aids: BB/LCD**

2. **Assignments / Questions**

- Comment on the role of Secure Electronic Transaction (SET) E-Commerce Transactions.

- Compare different Forensics Tools and identify the bet tools that are suitable for Computer Crime.

- Recent trends in Cell Phone and Mobile Devices Forensics.

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Actual Date of Completion & Remarks, if any

Units	Remarks
Unit 1	
Unit 2	
Unit 3	

Unit 4	
Unit 5	