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SAINTGITS COLLEGE OF APPLIED SCIENCES PATHAMUTTOM, KOTTAYAM

COURSE NAME : An Introduction to Cyber Attacks and Security

COURSE CODE:VCCAS012

Course objective: The learner will understand key terms and concepts in cyber-attacks, cyber security and cyber law. The learner will understand principles of web security and understanding of security policies (such as confidentiality, integrity, and availability).

Cyber Attacks: - History, Definition and characteristics, Factors affecting cyber-attacks, Classification - Syntactic and semantic attacks, Other cyber-attacks - Financial Scams, Hacking, Copyrighted content, Pornographic content, Virus, Cyber stalking, Hate crimes, Outcomes of cyber-attacks- Fraud, extortion, Malware, Pharming, Phishing, Spamming, Spoofing, Spying, Denial of Service, Distributed denial of service, Theft of hardware, Messaging abuse, Infrastructures as targets - Control systems, Energy, Finance, Telecommunications, Transportation, Water, Hospitals. **(8 hours)**

Cyber Security: - Definition, History, Fundamentals- The CIA Triad, Introduction to cyber space and cyber security, Cyber security challenges, Importance of cyber security, Security principles, Types of cyber security - Critical infrastructure security, Application security, Network security, Cloud security, Internet of things (IoT) security, Applications of cyber security. **(10 hours)**

Critical Analysis to cyber laws in India: - Introduction, Beginning of cybercrime era, Cybercrime in India, Cybercrime and cyber security, Consequences, How legal system deals with cyber terrorists, Information technology amendment act 2008 (ITAA 2008) – History Definitions, Penalties, Compensation and Adjudication, Case study of Indian and International cyber-attacks. **(14 hours)**

Reference Books: -

1. Fundamentals of Cyber Security
Bhushan/Rathore/Jamshed
BPB Publications: First edition (2017)
2. Information Security and Cyber Laws
Gaurav Gupta, Sarika Gupta
Khanna Publications: First edition (2019)

