SAINTGITS COLLEGE OF APPLIED SCIENCES PATHAMUTTOM, KOTTAYAM

An Introduction to Cyber Attacks, Security & IoT

Course objective: An Introduction to Cyber Security & IOT enables the participants to understand the basic IoT architecture and basic cyber security background

Understand Cyber Security and security policiesModule-1: IoT Introduction

Definition, Features, Advantages, Disadvantages, standard devices, Sensors- Different types, various forms of sensor data, Introduction to Big Data and cloud Computing.

Module-2: IoT Architecture and working-

IOT hardware sensors, wearable electronics and standard devices. Software data collection, integration, real time analysis

Module – 3: Cyber Attacks

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.

Module – 4: Cyber Security

Definition, History, Fundamentals- The CIA Trlad, 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.

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)