



SAINTGITS COLLEGE OF APPLIED SCIENCES

VALUE ADDED COURSES 2020—21

AN INTRODUCTION TO CYBER ATTACKS AND SECURITY



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ABOUT THE COURSE

An Introduction to Cyber Attacks and Security enables the participants to understand the basic cyber security background. It also includes the history of Cybersecurity, its types and motives of various attacks.

OBJECTIVES

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



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THE COURSE IS TO
EQUIP THE
STUDENTS WITH
LATEST
TECHNOLOGY
TRENDS IN
CYBER ATTACK

EXPECTED OUTCOMES

- Students will be able to understand the importance of cybersecurity and also get aware about the history and types of various cyber attacks.

DURATION

30 Hrs.



FEATURES

We provide practical sessions for this course

RELEVANCE

This course is designed to equip the students with the latest cybersecurity features. also familiarize about various cyber attacks trending in the world.

ADVANTAGES

With cyber security measures implemented at home, you are well guarded against fraudulent transactions or data loss through malware etc. The following is a list advantages of cyber security for individuals: **Protection from identity theft, financial loss, customer data loss or impacts on business operations.**

CONTENTS

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

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

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.



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SAINTGITS COLLEGE OF APPLIED SCIENCES

Pathamuttom, Kottayam - 686532

Phone : 0481 - 2433787

e-mail : scas@saintgits.org, Web : www.saintgits.org

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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)



