

23CS32E2 –CYBER SECURITY

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| Course Category: | Professional Elective - II | Credits: | 3 |
| Course Type: | Theory | Lecture-Tutorial-Practical: | 3-0-0 |
| Prerequisite: | <ul style="list-style-type: none"> • Knowledge in Cyber Security | Sessional Evaluation: | 30 |
| | Univ. Exam Evaluation: | | 70 |
| | Total Marks: | | 100 |
| | Students undergoing this course are expected: | | |
| Course Objectives: | <ul style="list-style-type: none"> • The course is designed to provide awareness on different cyber crimes, cyber offenses, tools and methods used in cybercrime. • To familiarize various types of cyber-attacks and cyber-crimes. • To give an overview of the cyber laws. • To study the defensive techniques against these attacks | | |

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| Course Outcomes: | Upon successful completion of the course, the students will be able to: | |
| | CO1 | Classify the cybercrimes and understand the Indian ITA 2000. |
| | CO2 | Analyse the vulnerabilities in any computing system and find the solutions |
| | CO3 | Predict the security threats of the future.... |
| | CO4 | Investigate the protection mechanisms |
| | CO5 | Design security solutions for organizations. |
| | UNIT-I | |
| | Introduction to Cyber crime: Introduction, Cybercrime, and Information Security, Who are Cybercriminals, Classifications of Cybercrimes, And Cybercrime: The legal Perspectives and Indian Perspective, Cybercrime and the Indian ITA 2000, A Global Perspective on Cybercrimes. | |
| | UNIT-II | |
| | Cyber Offenses: How Criminals Plan Them: Introduction, How Criminals plan the Attacks, Social Engineering, Cyber stalking, Cyber cafe and Cybercrimes, Botnets: The Fuel for Cybercrime, Attack Vector, Cloud Computing | |
| | UNIT-III | |
| | Cyber crime: Mobile and Wireless Devices: Introduction, Proliferation of Mobile and Wireless Devices, Trends in Mobility, Credit card Frauds in Mobile and Wireless Computing Era, Security Challenges Posed by Mobile Devices, Registry Settings for Mobile Devices, Authentication service Security, Attacks on Mobile/Cell Phones. | |
| Course Content: | Mobile Devices: Security Implications for Organizations, Organizational Measures for Handling Mobile, Organizational Security Policies an Measures in Mobile Computing Era, Laptops. | |
| | UNIT-IV | |
| | Tools and Methods Used in Cyber crime: Introduction, Proxy Servers and Anonymizers, Phishing, Password Cracking, Key loggers and Spywares, Virus and Worms, Trojan Horse and Backdoors, Steganography, DoS and DDoS attacks, SQL Injection, Buffer Overflow | |
| | UNIT-V | |
| | Cyber Security: Organizational Implications: Introduction, Cost of Cybercrimes and IPR issues, Web threats for Organizations, Security and Privacy Implications, Social media | |

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| | marketing: Security Risks and Perils for Organizations, Social Computing and the associated challenges for Organizations. |
| Text Books & References Books: | <p>TEXTBOOKS:</p> <ol style="list-style-type: none"> 1. Cyber Security: Understanding Cyber Crimes, Computer Forensics and Legal Perspectives, Nina Godbole and Sunil Belapurkar, Wiley INDIA <p>REFERENCE BOOKS:</p> <ol style="list-style-type: none"> 1. Cyber Security Essentials, James Graham, Richard Howard and Ryan Otson, CRC Press. 2. Introduction to Cyber Security , Chwan -Hwa (john) Wu ,J. David Irwin.CRC Press T&F Group |
| E-Resources: | <ol style="list-style-type: none"> 1. http://nptel.ac.in/courses/106105031/40 2. http://nptel.ac.in/courses/106105031/39 3. http://nptel.ac.in/courses/106105031/38 |