

## **Information Technology Syllabus Semester II**

**Course prerequisites:** Working knowledge of Computer and Internet

**Course objectives:** Develop an awareness and understanding of Cyber Security and its related aspects

and how to take measures to protect individual privacy and prevent loss/theft of data.

**Course contents: Total: 60 Hours**

**I Basics of Computer Networking(10%): Marks :10 & Lectures 08**

Networking basics, why networking of computer is needed, Internet – role and importance, IP

Addressing – public Vs Private, Static Vs Dynamic; WWW & related protocols;

**II Emerging threats in Cyber Space(20%): Marks :20 & Lectures 15**

Threats in Cyber Space, Classification of threats, BYOD and portable devices threats, 0-day

attacks, insider threats, Cyber Warfare, Malware threats, mobile apps threats;

**Social media and its safe usages:** Social media- its usages, Social networking- types, usages,

importance, social networking safety;

**III Online Privacy: (10 %) Marks :10 & Lectures 07**

Privacy – basic concepts, Sensitive personal information, Privacy policies, Google/Facebook

privacy policies, Privacy laws, IPR, Ethics & safe practices

**IV Cyber Crimes – an introduction: (20%) Marks :20 & Lectures 15**

Introduction – types of cyber crimes, its impact – social, personal, financial; Types of Cyber

Crimes (Phishing, social engineering, Denial of Service, Cyber stalking, ID-theft, etc), Cyber

Terrorism, How to report cyber crimes

**V Cyber Laws: (20 %) Marks :20 & Lectures 15**

Evolution and purpose, offence & defence, bailable and non-bailable offences, provisions related

to e-commerce, provisions for cyber crimes, adjudicating officers, CERT-IN- its role and powers

**VI Cyber Forensic: (20 %) Marks :20 & Lectures 15**

Data recovery, evidence collection, cloning of devices, media sanitization

### **Reference Books**

1. Rick Lehtinen and G.T. Gangemi, Computer Security Basics, O'Reilly Media, Inc.; 2nd edition, 2006
2. Wall, David, (2007). Cybercrime: The Transformation of Crime in the Information Age. Polity Publishing
3. Michael Cross, Scene of the Cyber Crime, Syngress Publishing, Elsevier Publishing, 2nd Edition, ISBN 13: 978-1-59749-276-8

4. Chander, Harish, Cyber Laws and IT Protection, ISBN: 978-81-203-4570-6, PHI Learning

**Web Resources:**

1. [www.cert.org](http://www.cert.org)
2. [www.microsoft.com/security/](http://www.microsoft.com/security/)
3. [www.nist.gov](http://www.nist.gov)
4. [www.sans.org](http://www.sans.org)
5. [www.us.cert.gov](http://www.us.cert.gov)
6. [http://en.wikipedia.org/wiki/List\\_of\\_cyber\\_attack\\_threat\\_trends](http://en.wikipedia.org/wiki/List_of_cyber_attack_threat_trends).