

Sri Lanka Institute of Information technology

Syllabus Information

Module Title	Information and Network Security	
Module Code	544	
Module Level	M.Sc. Degree in Information Technology	
Module Semester	Year 1 Semester 2	
Module Credits	4	
Hours	Lectures	28 Hrs
	Tutorials	-
	Practicals	-

AIMS AND OUTCOMES
<ol style="list-style-type: none"> 1. Understand the advanced analytical methods in cryptography and network security. 2. Gain insight into information and computer security relative to network architectures and security related to network devices. 3. Understand security of information relative to wireless networks and VPNs.

COURSE CONTENT	
Description	Hours
<ol style="list-style-type: none"> 1. Cryptography in Network Security Confidentiality and authentication, comparison of ciphers, design of secure encryption systems. 2. Network Design for Information Security Introduction to secure network design, cost of performance, network availability, remote access considerations, DMZs, host hardening, router protocols, network hardening, NAT as a security feature 3. VPN and Wireless Network Security VPN protocols, client/server remote access vulnerabilities and threats, RF security basics, controlling wireless access range, data-link wireless security, 4. Writing Secure Software Buffer overruns, integer overflow attacks, SQL injection attacks etc. 5. IP and Web Security IP security overview, encapsulating security payloads, key management, internetworking an internet protocols, Web security techniques, SSL, SET. 	<p>6</p> <p>6</p> <p>4</p> <p>6</p> <p>6</p>

READING LIST
Main Text
<p>Network Security: Private communication in a private world/2e Charlie Kaufman, Rodia Perlman and Mike Speciner Pearson Ed. 2002.</p>
Other Text
<p>Cryptography and Network Security: Principles and Practices /3e William Stallings, Prentice Hall Inc. 2003</p> <p>Network Security: The Complete Reference Roberta Bragg, Mark Rhodes-Ousley, and Keith Strassberg Tata-McGraw Hill 2004.</p>