

Branch Name:	CYBER SECURITY
Program Code:	ET207
Course Title:	Digital Devices Security , Tools and Technologies for Cyber Security
Course Code:	2ET2070206T
Pre-requisite Course:	Fundamental Knowledge of cyber security

Course Objectives: After successful completion of the course, student will be able to

1. To provide understanding of the main issues related to security in modern networked computer systems
2. To understand underlying concepts and foundations of computer security,
3. To gain basic knowledge about security-relevant decisions in designing IT infrastructures.
4. To learn different techniques to secure complex systems
5. To develop practical skills in managing a range of systems, from personal laptop to large-scale infrastructures

Teaching and Examination Scheme:

Credit	Teaching Scheme Hours per week				Evaluation Scheme (Marks)									Total (Marks)
					Theory (Marks)				Practical (Marks)					
	L	T	P	Total	SEE		CCA		SEE		CCA			
					Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.		
3	3	-	-	3	24	60	16	40	-	-	-	-	100	

Course Contents:

Unit No	Topics	Total Hours	Weightage (%)
1	Information Security: Introduction, How Much of Our Daily Lives Relies on Computers, Security Truisms, Basic Security, Terminology, and Cyber Ethics, The Perception of Security, Threat Model, and Security Is a Multidisciplinary Topic, Security Role-Playing Characters.	09	20
2	Passwords under Attack: Introduction, Authentication Process, Password Threats, Strong Passwords, Password Management. Email Security – Introduction, Email Systems, Email Security and Privacy.	09	20
3	Malware The Dark Side of Software, What Is Malware?, How Do I Get Malware?, What Does Malware Do?, Malware: Defense in Depth, Introduction, Data Backup, Firewalls, Software Patches, Antivirus Software, User Education Securely Surfing the World Wide Web: Introduction, Web Browser, "HTTP Secure", Web Browser History, Online Shopping, Consumer Decisions, Spyware and Key-Loggers, Wireless Sniffing, Scams and Phishing Websites, Misuse and Exposure of Information.	09	20
4	Wireless Internet Security: Introduction, How Wireless Networks Work, Wireless Security Threats, Public Wi-Fi Security, Wireless Network Administration Social Networking: Introduction, Choose Your Friends Wisely, Information Sharing, Malware and Phishing.	09	20

5	Social Engineering: Phishing for Suckers: Introduction, Social Engineering: Malware Distribution, Phishing, Detecting a Phishing URL, Application of Knowledge Staying Safe Online: The Human Threat: Introduction, The Differences between Cyberspace and the Physical World, Consider the Context: Watch What You Say and How It Is Communicated, What You Do on the Internet Lasts Forever, Nothing Is Private, Now or in the Future, Can You Really Tell Who You Are Talking with?, Cameras and Photo Sharing, I Am a Good Person, That Would Never Happen to Me, Is There Anything I Can Do to Make the Internet a Safer Place for My Child?	09	20
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Course Learning Outcomes (CLO):

Course Outcomes	Description	Bloom's Taxonomy Level
COL1	Understand the conceptual foundation of information security awareness.	Understanding (2) Applying (3)
COL2	Analysis the risk events, treatment plans, assessment	Applying (3)
COL3	Detail evaluation of information classification, roles and responsibilities	Applying (3)
COL4	Examining the access controls, monitoring, management and review process	Applying (3)
COL5	Study the physical and logical perimeters of information assets and its security.	Applying (3)

Text Books:

1. Douglas Jacobson, Joseph Idziorek, 2016, —Computer Security Literacy: Staying Safe in a Digital World, Ist Edition, Chapman and Hall/CRC Press.
2. Mike Harwood, 2015, —Internet Security: How to Defend Against Attackers on the Web, IInd Edition, Jones & Bartlett Learning Publisher.

Reference Books:

1. Richard E Smith, 2015, —Elementary Information Security, IInd Edition, Jones & Bartlett Learning Publisher.
2. Sean Philip Oriyano, 2010, —Hacker Techniques, Tools, and Incident Handling, Ist Edition, Jones & Bartlett Learning Publisher.
3. David Kim & Michael G. Solomon, 2016 —Fundamentals of Information Systems Security, IIIrd Edition, Jones & Bartlett Learning Publisher.

Mapping of CLO with PO and PSO

Course Learning Outcomes	Program Outcomes (POs)												Program Specific Outcomes(PSOs)			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
CLO1	H	M	M		M											
CLO2	H	M			M							L				
CLO3	H	M	M		M											
CLO4	M	M	M		M							L				
CLO5	M	M										L				

H: High, M: Medium, L: Low