

 <b>Tulsiramji Gaikwad-Patil College of Engineering and Technology</b> Wardha Road, Nagpur-441 108 <b>NAAC Accredited with A+ Grade</b> (An Autonomous Institute Affiliated to RTM Nagpur University, Nagpur)					
		<b>Program: B. Tech. Information Technology</b>					
Semester	Course Code	Name of Course	L	T	P	Credits	
VI	BITXX03	Cyber Security (Open Elective)	4	-	-	4	
<b>Teaching Scheme</b>			<b>Examination Scheme</b>				
Theory	4 Hrs/week			CT-I	15 Marks		
Tutorial	-			CT-II	15 Marks		
Total Credits	3			CA	10 Marks		
Duration of ESE: 3Hrs					ESE	60 Marks	
<b>Pre-Requisites:</b> Computer Network , Operating Systems							
<b>Course Contents</b>							

<b>Unit I</b>	Introduction to Cyber Security, introduction to cybercrime ,Reasons of cybercrime, History of cybercrime ,Types of cyber crime
<b>Unit II</b>	Cyber security components – OSI Layer ,Zero day attacks, Types of network attacks, Application security, end point security ,Mobile security, data security, Infrastructure security
<b>Unit III</b>	Fighting cyber-attacks-Authentication ,cryptography, firewall, Data loss prevention ,Web browsers ,Data backup, Cybercrime- Mobile and wireless device
<b>Unit IV</b>	Tools and methods used in cyber crime-,password cracking , key loggers and spywares ,DoS and DDoS attacks , SQL injections ,Attacks on wireless networks, Phishing and identity thefts.
<b>Unit V</b>	Security issues in Hardware ,Security polices and standards

<b>Text Books</b>	
T.1	FUNDAMENTAL OF CYBER SECURITY: Principles, Theory and Practices By Mayank Bhusan , Rajkumar Singh Rathore, Aatif Jamshed
T.2	Introduction to Cyber Security: Guide to the World of Cyber Security, Anand Shinde
<b>Reference Books</b>	
R.1	Cyber security essentials by Charles J. Brooks, Christopher Grow, Philip A. Craig, Jr. · 2018

	Course Outcomes	CL	Class Sessions	Lab Sessions
BITXX03.1	Understand different types of cyber crimes	2	9	-
BITXX03.2	Identify various cyber security components	2	9	-
BITXX03.3	Analyze the security challenges presented by mobile devices and information systems access in the cybercrime world.	4	9	-
BITXX03.4	Evaluate different tools and methods used in cyber crime	4	9	-
BITXX03.5	Deploy the different Security policies and standards	3	9	-

  
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