SCHEME OF COURSE WORK

Course Details:

Course Title	:scripting languages				
Course Code	:13CS2203	L T P C			:4 0 0 3
Program:	: M.Tech.				
Specialization:	: Cyber Security				
Semester	:Ist Semester				
Prerequisites	: Any programming course, knowledge of Unix and PC Environments				
Courses to which it is a prerequisite		-			

Course Outcomes (COs):

1	Understand the scripting language paradigm.
2	Understand the tradeoffs (advantages and disadvantages) of scripting versus traditional programming.
3	Understand different proficient programmers in at least two scripting tools/languages, including bash and Perl
4	Implement scripts using Unix/bash / perl.
5	Understand crypto system like encryption and decryption with scripting Languages.

Program Outcomes (POs):

A graduate of Cyber Security Specializationwill be able to

1	Understand what are the common threats faced today.
2	The foundational theory behind Cyber security
3	The basic principles and techniques when designing a secure system,
4	How to think adversarial, how today's attacks and defenses work in practice, how to assess threats for their significance, and how to gauge the protections and limitations provided by today's technology
5	The basic principles and techniques in ethical hacking and overcome various hackers
6	Learn various security methodologies to enhance the security of web.
7	Basic principles of cyber laws and security policies
8	Various scripting languages to develop programs for security mechanisms.
9	Various tools and methodologies to analyze the various cyber crimes
10	Secure protocols inner mechanisms and their practical implementation
11	Various Forensic technologies and methodologies for security measurements analyzation.
12	.Intrusion detection techniques and image model security aspects in Android application developments.

Course Outcome versus **Program Outcomes:**

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO-1			S			S						
CO-2	M	M	S							S		M
CO-3			M							S		M
CO-4		S		S								
CO-5												S

S - Strongly correlated, *M - Moderately* correlated, *Blank - No correlation*

Assessment Methods:	Assignment / Quiz / Seminar / Case Study / Mid-Test / End Exam

Teaching-Learning and Evaluation

Week	TOPIC / CONTENTS	Course Outcomes	Sample questions	TEACHING-LEARNING STRATEGY	Assessment Method & Schedule
1	Introduction to PERL and Scripting- Scripts and Programs, Origin of Scripting , Scripting Today	CO-1	1.Explain in detail about the origin of scripting languages?	▫ Lecture ▫ Demonstration	Assignment
2	Characteristics of Scripting Languages, Web Scripting, and the universe of Scripting Languages	CO-1	1.Explain the Characteristics of scripting languages?	▫ Lecture / Discussion	Mid-Test 1
3	PERL- Names and Values, Variables, Scalar Expressions, Control Structures,	CO-2	1.Explain in detail about names and values of perl with examples? 2.explain the control structures of perl with examples?	▫ Guest Lecture	Assignment-1
4	arrays, list, hashes, strings, pattern and regular expressions	CO-3,CO-4	1.what is an array? Explain the functions of an array with examples? 2.explain in detail abou list ,hashes with atleast two examples?	▫ Lecture demonstration	Assignment
5	subroutines, advance perl - finer points of looping, pack and unpack	CO-3	1.Explain pack and unpack in detail w ith example?		Mid -Test-1
6	File system, eval, data structures, packages, modules, objects, interfacing to the operating system, Creating Internet ware applications, Dirty Hands Internet Programming, security Issues	CO-3,CO-4	1.Explain the packages and modules? 2.Explain creating internet ware applications?	▫ Discussion	Mid Test-1
7	PHP Basics- Features, Embedding PHP Code in your Web pages, Outputting the data to the browser, Data types, Variables, Constants, expressions, string interpolation, control structures	C0-4	1.Explain the features of PHP? and explain the procedure of embedding PHP code in your web pages with a sample program?	▫ Lecture	Assignment
8	Data types, Variables, Constants, expressions, string interpolation, control structures		1.Explain the control structures of php with sample programs?	▫ Lecture/discussion	Mid Test -1

9	Mid-Test 1	CO-1,CO-2			
10	Function ,Creating a Function, Function Libraries ,Arrays ,strings and Regular Expressions.	CO-4	Explain function libraries of php?	▫ Discussion	Assignment
11	Advanced PHP Programming-Php and Web Forms, Files, PHP Authentication and Methodologies - Hard Coded, File Based, Database Based	CO-3	1.Explain briefly about PHP Authentication and methodologies.	▫ Lecture ▫ Discussion	Mid-Test 2
12	IP Based, Login Administration, Uploading Files with PHP, Sending Email using PHP.	CO-3	1.Explain the methods of uploading files with php?	Lecture	Seminar
13	PHP Encryption Functions, the Mcrypt package, Building Web sites for the World	CO-3	1.Explain in detail about PHP's Encryption function?explain the encrypting and decrypting data with mcrypt package ?		Assignment
14	TCL – Tk: TCL Structure, syntax, Variables and Data in TCL, Control Flow	CO-3	1.Descibe in detail about TCL structure and the syntax of TCL?		Mid Test-2
15	Data Structures, input/output, procedures , strings , patterns, files.	C0-5	1.Explain the data structures of tcl in detail with examples?		Assignment
16	Advance TCL- eval, source, exec and up level commands, Name spaces, trapping errors	CO-5	1.Explain in detail the name spaces of php with example?		Mid Test-2
17	event driven programs, making applications internet aware, Nuts and Bolts Internet Programming, Security Issues, C Interface	CO-5	1.Explain the event driven programs ?	▫ Discussion	Assignment
18	Mid-Test 2				
19/20	END EXAM				