

**PERL & TCL**

<b>Course Code</b>	20EC4703C	<b>Year</b>	IV	<b>Semester</b>	I
<b>Course Category</b>	Professional Elective-V	<b>Branch</b>	ECE	<b>Course Type</b>	Theory
<b>Credits</b>	3	<b>L-T-P</b>	3-0-0	<b>Prerequisites</b>	Computer Architecture & Organization
<b>Continuous Internal Evaluation:</b>	30	<b>Semester End Evaluation:</b>	70	<b>Total Marks:</b>	100

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**Course Outcomes**

Upon successful completion of the course, the student will be able to	
<b>CO1</b>	Convert functional logic to programming statements (L3).
<b>CO2</b>	Integrate the concepts that he/she has learnt, for developing large computer programs and applications that are part of bigger projects (L3).
<b>CO3</b>	Develop scripts for automating day to day tasks in projects for better and faster execution of work (L3).
<b>CO4</b>	Apply your knowledge of the weaknesses of scripting languages to select implementation (L3).
<b>CO5</b>	Survey many of the modern language features that show up frequently in scripting languages (L4)

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**Mapping of course outcomes with Program outcomes (CO/ PO/PSO Matrix)**

Note: 1- Weak correlation 2-Medium correlation 3-Strong correlation

\* - Average value indicates course correlation strength with mapped PO

COs	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2
CO1	3											2		
CO2	2		3									3	2	
CO3	3		2										3	
CO4	3													
CO5		3			3					3				2
Average* (Rounded to nearest integer)	3	3	3		3					3		3	3	2

**Syllabus**

Unit No.	Contents	Mapped CO
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I	<b>Practical Extraction and Reporting Language (PERL) Part-I :</b> Tokens, Variables, Substitutions, Contexts, Lists, Operators, Flow control statements, Built-in functions for Strings	CO1,CO2,CO3
II	<b>PERL LANGUAGE PART-II :</b> Arrays, Hash, Time, Maths, Base Conversion & Formatting, References, Anonymous Arrays, Hashes & Subroutines. Data Structures.	CO1,CO2,CO3
III	<b>PERL LANGUAGE PART-III:</b> Sub routines, Scope of variables, Packages, Modules, Nested Modules, Libraries, Text Files, Binary Files, Command Piping, File & Directory Functions, Directory handle, Regular expressions, Match, substitution & Transliteration. Assertions.	CO1,CO2,CO3
IV	<b>Tool Command Language (TCL) Scripting Language Part-I :</b> Tokens, variables, commands, substitutions, operators, flow control statements	CO3,CO4,CO5
V	<b>TCL SCRIPTING LANGUAGE Part-II :</b> Built-in Commands for: Lists, strings, pattern matching, formatting, maths; custom commands, global, upvar and uplevel commands, files.	CO3,CO4,CO5

#### Learning Resources

##### **Text Books**

1. Martin. C. Brown, "PERL: The Complete Reference", TMH, 2001.
2. John Ousterhout, "TCL / TK programming", Pearson Education, 2002.

##### **Reference Books**

1. 1. Steven Holzner, "PERL: Black Book", 2 Ed., 2004.
2. "TCL / TK 8.5 Programming Cook Book", Packt Publishing Ltd., 2011.

##### **e- Resources & other digital material**

1. <https://nptel.ac.in/courses/117106113>
2. <https://www.coursera.org/lecture/ibm-penetration-testing-incident-response-forensics/scripting-languages-le8oZ>