



VEMANA INSTITUTE OF TECHNOLOGY

Koramangala, Bengaluru - 34

Department of Computer Science & Engineering



Course Outcomes & CO-PO-PSO Mapping and Justification

Subject	Automata Theory & Computability	17CS54
COURSE OUTCOMES:		
CO No.	On completion of this course, students will be able to:	Cognitive Level
17CS54.1	Construction of DFA,NFA and ϵ -NFA and regular expressions for the languages	L3
17CS54.2	Understand the concept of converting NFA to DFA, ϵ -NFA to DFA, automata to regular expressions and regular expression to automata	L2
17CS54.3	Remembering pumping lemma for regular languages and context free languages.	L1
17CS54.4	Construct a CFG, parse trees and PDA.	L3
17CS54.5	Understand the concepts of converting grammar to PDA and PDA to grammar.	L2
17CS54.6	Understand the working principles of Turing Machine and post correspondence problem	L2

CO-PO-PSO MAPPING

CO No.	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
17CS54.1	3	1	1	-	-	-	-	-	-	-	-	1	-	-	2
17CS54.2	2	-	-	-	-	-	-	-	-	-	-	1	-	-	2
17CS54.3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2
17CS54.4	1	1	2	-	-	-	-	-	-	-	-	1	-	-	2

17CS54.5	2	2	-	-	-	-	-	-	-	-	-	1	-	-	2
17CS54.6	2	1	-	-	-	-	-	-	-	-	-	1	-	-	2
Avg. Mapping	1.8	1.3	1.5	-	-	-	-	-	-	-	-	1.0	-	-	2.0

CO-PO-PSO JUSTIFICATION

CO No.	PO/PSO	CL	Justification
17CS54.1	PO1	3	Basic Mathematics knowledge such as set theory, relations, functions and proof methods (induction, deduction, and contradiction) are used for verification of properties. Apply theory and principles of computer science engineering to solve an engineering problem.
	PO2	1	Classification of real world problems such as lexical analyzers, compilers, network protocols, signaling systems etc and then accordingly providing appropriate design
	PO3	1	Ability to explore design alternatives.
	PO12	1	Describe requirement for continuing professional development.
	PSO3	2	The skills of designing Finite state machines are relevant to design secure network systems.
17CS54.2	PO1	2	Apply theory and principles of computer science engineering to solve an engineering problem.
	PO12	1	Describe requirement for continuing professional development.
	PSO3	2	The skills of designing Finite state machines are relevant to design secure network systems.
17CS54.3	PO1	1	Apply theory and principles of computer science engineering to solve an engineering problem.
	PSO3	2	The skills of designing Finite state machines are relevant to design secure network systems.
17CS54.4	PO1	1	Apply theory and principles of computer science engineering to solve an engineering problem.
	PO2	1	Classification of real world problems such as lexical analyzers, compilers, network protocols, signaling systems, etc and then accordingly providing appropriate design
	PO3	2	Identify suitable criteria for evaluation of alternate design solutions and Demonstrate an ability to advance an engineering design to defined end state
	PO12	1	Describe requirement for continuing professional development.

	PSO3	2	The skills of designing Finite state machines are relevant to design secure network systems.
17CS54.5	PO1	2	Apply theory and principles of computer science engineering to solve an engineering problem.
	PO2	2	Identify the mathematical, engineering and other relevant knowledge that applies to a given problem and Apply engineering mathematics and computations to solve mathematical problems
	PO12	1	Describe requirement for continuing professional development.
	PSO3	2	The skills of designing Finite state machines are relevant to design secure network systems.
17CS54.6	PO1	2	Apply theory and principles of computer science engineering to solve an engineering problem.
	PO2	1	Classification of real world problems such as signaling systems, and then accordingly providing appropriate design
	PO12	1	Describe requirement for continuing professional development.
	PSO3	2	The skills of designing Finite state machines are relevant to design secure network systems.

Prepared by

HoD

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