

## Department of Computer Science & Engineering

### Artificial Intelligence and Machine Learning

### Lesson Plan & Work-done Diary for AY: 2023-2024

#### ODD SEMESTER

Course with Code: Automata Theory and Compiler Design -21CS51				Faculty Name: Mrs. Khateeja Ambareen			Semester & Section: V(AIML)	
Class No.	Date Planned (DD/MM/YYYY)	Topics to be covered	TLP Planned	Class No.	Date of Conduction (DD/MM/YYYY)	Topics Covered	TLP Executed	Remarks if any deviation
<b>Module-1 Introduction to Automata Theory &amp; Compiler Design</b>								
1		Central Concepts of Automata Theory	Chalk And Talk, PPT	1				
2		Deterministic Finite Automata (DFA)	Chalk And Talk, PPT	2				
3		Non- Deterministic Finite Automata (NFA)	Chalk And Talk, PPT	1				
4		Epsilon- NFA, NFA to DFA Conversion	Chalk And Talk, PPT	1				
5		Minimization of DFA	Chalk And Talk, PPT	1				
6		Language Processors	Chalk And Talk, PPT	1				
7		Phases of Compilers	Chalk And Talk, PPT	1				

<b>Course with Code:</b> Automata Theory and Compiler Design -21CS51				<b>Faculty Name:</b> Mrs. Khateeja Ambareen			<b>Semester &amp; Section:</b> V(AIML)	
<b>Class No.</b>	<b>Date Planned (DD/MM/YYYY)</b>	<b>Topics to be covered</b>	<b>TLP Planned</b>	<b>Class No.</b>	<b>Date of Conduction (DD/MM/YYYY)</b>	<b>Topics Covered</b>	<b>TLP Exec uted</b>	<b>Remarks if anydeviation</b>
<b>Module-2 Regular Expressions and Languages, Lexical Analysis</b>								
1		Regular Expressions	Chalk And Talk, PPT	1				
2		Finite Automata and Regular Expressions	Chalk And Talk, PPT	1				
3		Proving Languages Not to be Regular	Chalk And Talk, PPT	1				
4		Lexical Analysis - The Role of Lexical Analyzer	Chalk And Talk, PPT	1				
5		Input Buffering	Chalk And Talk, PPT	1				
6		Specifications of token, Recognition of Tokens	Chalk And Talk, PPT	1				

<b>Course with Code:</b> Automata Theory and Compiler Design -21CS51				<b>Faculty Name:</b> Mrs. Khateeja Ambareen			<b>Semester &amp; Section:</b> V(AIML)	
<b>Class No.</b>	<b>Date Planned (DD/MM/YYYY)</b>	<b>Topics to be covered</b>	<b>TLP Planned</b>	<b>Class No.</b>	<b>Date of Conduction (DD/MM/YYYY)</b>	<b>Topics Covered</b>	<b>TLP Exec uted</b>	<b>Remarks if anydeviation</b>
<b>Module-3 Context Free Grammars, Syntax Analysis – Part 1</b>								

1		Definition and designing CFGs	Chalk And Talk, PPT	1				
2		Derivations Using a Grammar, Parse Trees	Chalk And Talk, PPT	1				
3		Ambiguity and Elimination of Ambiguity	Chalk And Talk, PPT	1				
4		Elimination of Left Recursion, Left Factoring	Chalk And Talk, PPT	1				
5		Role of Parser	Chalk And Talk, PPT	1				
6		Top-Down Parsers	Chalk And Talk, PPT	1				
7		Quiz on syntax analysis	QUIZ	1				

Course with Code: Automata Theory and Compiler Design -21CS51				Faculty Name: Mrs. Khateeja Ambareen			Semester & Section:V(AIML)	
Class No.	Date Planned (DD/MM/YYYY)	Topics to be covered	TLP Planned	Class No.	Date of Conduction (DD/MM/YYYY)	Topics Covered	TLP Executed	Remarks if any deviation
<b>Module-4 Push Down Automata, Syntax Analysis – Part 2</b>								
1		Definition of the Pushdown Automata, The Languages of a PDA	Chalk And Talk, PPT	1				

2		Bottom-up Parsing	Chalk And Talk, PPT	2				
3		Introduction to LR Parsing: SLR	Chalk And Talk, PPT	2				
4		More Powerful LR parsers	Chalk And Talk, PPT	2				
5		Quiz on Parser	Chalk And Talk, PPT	1				

Course with Code: Automata Theory and Compiler Design -21CS51				Faculty Name: Mrs. Khateeja Ambareen			Semester & Section:V(AIML)	
Class No.	Date Planned (DD/MM/YYYY)	Topics to be covered	TLP Planned	Class No.	Date of Conduction (DD/MM/YYYY)	Topics Covered	TLP Executed	Remarks if any deviation
<b>Module-5 Introduction to Turing Machine, Undecidability, SDD, Intermediate-Code Generation, Code Generation</b>								
1		Problems that Computers Cannot Solve	Chalk And Talk, PPT	1				
2		The Turing machine, problems	Chalk And Talk, PPT	1				
3		Programming Techniques for Turing Machine	Chalk And Talk, PPT	1				
4		Extensions to the Basic Turing Machine	Chalk And Talk, PPT	1				

5		A language That Is Not Recursively Enumerable	Chalk And Talk, PPT	1				
6		An Undecidable Problem That Is RE	Chalk And Talk, PPT	1				
7		Syntax-Directed Definitions, Evaluation Orders for SDD's	Chalk And Talk, PPT	1				
8		Variants of Syntax Trees, Three Address Code	Chalk And Talk, PPT	1				
9		Issues in the Design of a Code Generator	Chalk And Talk, PPT	1				

	Activity	Planned	Actual	Remarks
1	Theory Classes	40		
2	Assignments/ Quizzes/ Self-study	5		
3	Tutorials/ Extra classes	3		
4	Internal Assessments	3		

<b>5</b>	ICT based Teaching (% of usage in Curriculum)	100%		
<b>Planning</b>			<b>Execution</b>	
<b>Faculty Signature:</b>			<b>Faculty Signature:</b>	
<b>HoD Signature:</b>			<b>HoD Signature:</b>	