

LESSON PLAN

Semester:6th			Course: B.Tech
		Sub: Compiler Design	Total Credit:03
Branch : CSE		Sub Code :	
Name of the Faculty:		Monali Patel	
Designation :		Asst Prof	
Department :		CSE	
Session		2024-25	
Recommended Books		Text book:	
		1 Modern Compiler Design, D. Galles, 1st Ed., Pearson Education,2004	
		2 Advanced Compiler Design & Implementation, S. S. Muchnick, Morgan Kaufmann, 1997	
		Reference Books:	
		1 Compilers – Principles, Techniques and Tools, A. V. Aho, M. S. Lam, R. Sethi, J. D. Ullman, 2nd Ed., Pearson. 2007	
Sl. No.	Lecture No.	Topics to be covered	No. of Classes
MODULE-1			
1	Lecture-01	Overview and Phases of compilation	11
2	Lecture-02	Non-Deterministic and Deterministic Finite Automata (NFA & DFA)	
3	Lecture-03	Regular grammar, Regular expressions and Regular languages	
4	Lecture-04	Design of a Lexical Analyzer as a DFA, Lexical Analyzer generator	
5	Lecture-05	Role of a Parser, Context free grammars and Context free languages	
6	Lecture-06	Parse trees and derivations, Ambiguous grammar	
7	Lecture-07	Top Down Parsing: Recursive descent parsing, LL (1) grammars, Non-recursive Predictive Par	
8	Lecture-08	Error reporting and Recovery. Bottom Up Parsing: Handle pruning and shift reduces Parsing	
9	Lecture-09	arsers and construction or SLR parsing tables, LR(1) parsers and construction of LR(1) parsing	
10	Lecture-10	LR parsers and construction of efficient LALR parsing tables, Parsing using Ambiguous gramm	
11	Lecture-11	Error reporting and Recovery, Parser generator	
MODULE-2			
12	Lecture-12	DAG for expressions, Three address codes - Quadruples and Triples	6
13	Lecture-13	Types and declarations, Translation of Expressions	
14	Lecture-14	Array references, Type checking and Conversions	
15	Lecture-15	Translation of Boolean expressions and control flow statements	
16	Lecture-16	Back Patching	
17	Lecture-17	Intermediate Code Generation for Procedures	
MODULE-3			
18	Lecture-18	Factors involved, Registers allocation	8
19	Lecture-19	Simple code generation using STACK Allocation	
20	Lecture-20	Basic blocks and flow graphs	
21	Lecture-21	Simple code generation using flow graphs.	
22	Lecture-22	Objective, Peephole Optimization	
23	Lecture-23	Concepts of Elimination of local common Sub expressions	
24	Lecture-24	Redundant and un-reachable codes	
25	Lecture-25	Basics of flow of control optimization	
MODULE-4			
26	Lecture-26	Storage Organizations	

27	Lecture-27	Static and Dynamic Storage Allocations	11
28	Lecture-28	STACK Allocation	
29	Lecture-29	Handlings of activation records for calling sequences	
30	Lecture-30	Syntax Directed Definitions (SDD)	
31	Lecture-31	Inherited and Synthesized Attributes	
32	Lecture-32	Dependency graphs	
33	Lecture-33	Evaluation orders for SDD, Semantic rules	
34	Lecture-34	Application of Syntax Directed Translation.	
35	Lecture-35	Structure and features of symbol tables	
36	Lecture-36	symbol attributes and scopes	

Signature of Faculty Member

Signature of HOD

PRINCIPAL