

ST.ANN'S COLLEGE OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
LECTURE SCHEDULE

Subject: COMPILER DESIGN
Name: T. KRISHNA KISHORE

Academic Year: 2017-18
Year/Semester: III-I Semester 'C'

No. of Lectures per week : 4 + 2* (Tutorial)

S.No.	DATE	UNIT	TOPICS
1	12-06-2017	I	Overview of language Processing
2	13-06-2017		Pre-processors , Compiler, Assembler
3	15-06-2017		Interpreters, Linkers & Loaders
4	16-06-2017		TUTORIAL
5	16-06-2017		TUTORIAL
6	17-06-2017		Structure of a Compiler, Phases of a compiler
7	19-06-2017		Lexical Analysis, Role of Lexical Analysis
8	20-06-2017		Lexical Analysis Vs. Parsing , Token, patterns and Lexemes
9	22-06-2017		Lexical Errors, R.E- Reg. definitions for the lang. constructs
10	23-06-2017		TUTORIAL
11	23-06-2017		TUTORIAL
12	24-06-2017		Strings, Sequences, Comments
13	27-06-2017		Trans diag. for tokens, Reserved words and identifiers, Ex.
14	29-06-2017		REVISION THROUGH NPTEL VIDEO / PPT
15	30-06-2017		TUTORIAL
16	30-06-2017		TUTORIAL
17	01-07-2017		CLASS TEST - I
18	03-07-2017	II	OBJECTIVE TEST- I, Syntax Analysis
19	04-07-2017		Discussion on CFG, LMD,RMD, parse trees
20	06-07-2017		Role of a parser , Classification of parsing techniques
21	07-07-2017		TUTORIAL
22	07-07-2017		TUTORIAL
23	10-07-2017		Brute force approach, left recursion, left factoring
24	11-07-2017		Top down parsing , First and Follow
25	13-07-2017		LL(1) Grammars
26	14-07-2017		Non-Recursive predictive parsing ,
27	14-07-2017		Error recovery in predictive parsing
28	15-07-2017		REVISION THROUGH NPTEL VIDEO / PPT
29	17-07-2017		CLASS TEST - II
30	18-07-2017		III
31	20-07-2017	Types of Bottom up approaches	
32	21-07-2017	TUTORIAL	
33	21-07-2017	TUTORIAL	
34	22-07-2017	Introduction to simple LR, Why LR Parsers, Model of an LR Parsers	
35	24-07-2017	Operator Precedence, Shift Reduce Parsing	
36	25-07-2017	Difference between LR and LL Parsers	
37	27-07-2017	Construction of SLR Tables, More powerful LR parsers	
38	28-07-2017	TUTORIAL	
39	28-07-2017	TUTORIAL	
40	29-07-2017	CLR (1), LALR Parsing tables, Dangling ELSE Ambiguity	
41	31-07-2017	Error recovery in LR Parsing	
42	01-08-2017	Comparison of all bottom up with all top down approaches	
43	03-08-2017	REVISION THROUGH NPTEL VIDEO / PPT	
44	04-08-2017	TUTORIAL	
45	04-08-2017	TUTORIAL	
46	05-08-2017	Previous Papers Solving	
47	07-08-2017	Previous Papers Problems on Top Down Parsers	
48	08-08-2017	Previous Papers Problems on Bottom Up Parsers	
49	10-08-2017	Previous Papers Problems on LL and LR Parsers	

50	11-08-2017		Previous Papers Problems on SLR Parsers
51	11-08-2017		Previous Papers Problems on CALR Parsers.
52	12-08-2017		Previous Papers Problems on LALR Parsers.
53	17-08-2017	IV	Semantic analysis: SDT Schemes
54	18-08-2017		TUTORIAL
55	18-08-2017		TUTORIAL
56	19-08-2017		Evaluation of Semantic Rules
57	21-08-2017		Intermediate code , Three Address Code
58	22-08-2017		Quadruples, Triples,
59	24-08-2017		Abstract Syntax Trees
60	28-08-2017		Types and declarations,
61	29-08-2017		Type Checking
62	31-08-2017		REVISION THROUGH NPTEL VIDEO / PPT
63	01-09-2017		TUTORIAL
64	01-09-2017		TUTORIAL
65	04-09-2017		CLASS TEST - III
66	05-09-2017		V
67	07-09-2017	Runtime Environment: storage organization, stack allocation	
68	08-09-2017	TUTORIAL	
69	08-09-2017	TUTORIAL	
70	09-09-2017	Access to non-local data, heap management, Parameter Passing Mechanisms	
71	11-09-2017	Reference counting and Garbage collectors	
72	12-09-2017	Code generation: Issues, target language	
73	14-09-2017	Basic blocks & flow graphs, Simple code generator	
74	15-09-2017	TUTORIAL	
75	15-09-2017	TUTORIAL	
76	16-09-2017	Peephole optimization , Register allocation and assignment	
77	18-09-2017	REVISION THROUGH NPTEL VIDEO / PPT	
78	19-09-2017	CLASS TEST- IV	
79	21-09-2017	VI	
80	22-09-2017		TUTORIAL
81	22-09-2017		TUTORIAL
82	23-09-2017		Semantic Preserving Transformations
83	25-09-2017		Global Common Sub Expr. Elimination, Copy Propagation
84	26-09-2017		Dead Code Elimination, Constant Folding
85	03-10-2017		Strength Reduction
86	05-10-2017		Loop Optimization Techniques
87	06-10-2017		Instruction scheduling,
88	06-10-2017		Inter Procedural Optimization
89	07-10-2017		REVISION THROUGH NPTEL VIDEO / PPT
90	09-10-2017		Revision
91	10-10-2017		Revision
92	12-10-2017		Revision
93	13-10-2017	Revision	
94	13-10-2017	Revision	
95	14-10-2017	Revision	

Text Books:

1. Compilers, Principles Techniques and Tools- Alfred V Aho, Monica S Lam, Ravi Sethi, Jeffrey D. Ullman, 2nd ed, Pearson, 2007.
2. Compiler Design, K. Muneeswaran, Oxford.

Reference Books:

1. Engineering a compiler, 2nd edition, Keith D. Cooper & Linda Torczon, Morgan Kaufman.
2. <http://www.nptel.iitm.ac.in/downloads/106108052/>
3. Principles of compiler design, V. Raghavan, 2nd ed, TMH, 2011.
4. Compiler construction, Principles and Practice, Kenneth C Loudon, CENGAGE.
5. Implementations of Compiler, A new approach to Compilers including the algebraic methods, Yunlinsu, SPRINGER.

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