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

Subject: COMPILER DESIGN **Academic Year: 2017-18**
Name: T. KRISHNA KISHORE **Year/Semester: III-I Semester 'A'**
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	14-06-2017		Interpreters, Linkers & Loaders
4	15-06-2017		Structure of a Compiler, Phases of a compiler
5	17-06-2017		**TUTORIAL**
6	17-06-2017		**TUTORIAL**
7	19-06-2017		Lexical Analysis, Role of Lexical Analysis
8	20-06-2017		Lexical Analysis Vs. Parsing ,Token, patterns and Lexemes
9	21-06-2017		Lexical Errors, R.E- Reg. definitions for the lang. constructs
10	22-06-2017		Strings, Sequences, Comments
11	24-06-2017		**TUTORIAL**
12	24-06-2017		**TUTORIAL**
13	27-06-2017		Trans diag. for tokens, Reserved words and identifiers, Ex.
14	28-06-2017		**REVISION THROUGH NPTEL VIDEO / PPT**
15	29-06-2017		**CLASS TEST - I**
16	01-07-2017	II	**OBJECTIVE TEST- I , Syntax Analysis**
17	01-07-2017		Discussion on CFG ,LMD,RMD, parse trees
18	03-07-2017		Role of a parser , Classification of parsing techniques
19	04-07-2017		Brute force approach with examples
20	05-07-2017		left recursion, left factoring
21	06-07-2017		Top down parsing , First and Follow
22	10-07-2017		LL(1) Grammars
23	11-07-2017		Non-Recursive predictive parsing , Error recovery in predictive parsing
24	12-07-2017		Previous papers solving
25	13-07-2017		**REVISION THROUGH NPTEL VIDEO / PPT**
26	15-07-2017		**TUTORIAL**
27	15-07-2017		**TUTORIAL**
28	17-07-2017		**CLASS TEST - II**
29	18-07-2017	III	**OBJECTIVE TEST- II , What is bottom up parsing approach**
30	19-07-2017		Types of Bottom up approaches, Introduction to simple LR
31	20-07-2017		Why LR Parsers, Model of an LR Parsers
32	22-07-2017		**TUTORIAL**
33	22-07-2017		**TUTORIAL**
34	24-07-2017		Operator Precedence, Shift Reduce Parsing
35	25-07-2017		Difference between LR and LL Parsers
36	26-07-2017		Construction of SLR Tables, More powerful LR parsers
37	27-07-2017		CLR (1), LALR Parsing tables
38	29-07-2017		**TUTORIAL**
39	29-07-2017		**TUTORIAL**
40	31-07-2017		Dangling ELSE Ambiguity, Error recovery in LR Parsing
41	01-08-2017		Comparison of all bottom up with all top down approaches
42	02-08-2017		Previous papers solving
43	03-08-2017		**REVISION THROUGH NPTEL VIDEO / PPT**
44	05-08-2017		**TUTORIAL**
45	05-08-2017		**TUTORIAL**
46	07-08-2017		Previous Papers Problems on Top Down Parsers
47	08-08-2017		Previous Papers Problems on Bottom Up Parsers
48	09-08-2017		Previous Papers Problems on LL and LR Parsers
49	10-08-2017		Previous Papers Problems on SLR Parsers

50	12-08-2017		Previous Papers Problems on CALR Parsers.
51	12-08-2017		Previous Papers Problems on LALR Parsers
52	16-08-2017	IV	**Semantic analysis**
53	17-08-2017		SDT Schemes, Evaluation of Semantic Rules
54	19-08-2017		**TUTORIAL**
55	19-08-2017		**TUTORIAL**
56	21-08-2017		Intermediate code
57	22-08-2017		Three Address Code
58	23-08-2017		Quadruples, Triples, Abstract Syntax Trees
59	24-08-2017		Types and declarations
60	28-08-2017		Type Checking
61	29-08-2017		**REVISION THROUGH NPTEL VIDEO / PPT**
62	30-08-2017		**CLASS TEST - III**
63	31-08-2017	V	**OBJECTIVE TEST- III, Symbol Table,** use and need of symbol tables
64	04-09-2017		Runtime Environment: storage organization, stack allocation
65	05-09-2017		Access to non-local data, heap management, Parameter Passing Mechanisms
66	06-09-2017		Reference counting and Garbage collectors
67	07-09-2017		Code generation: Issues, target language
68	09-09-2017		**TUTORIAL**
69	09-09-2017		**TUTORIAL**
70	11-09-2017		Basic blocks & flow graphs, Simple code generator
71	12-09-2017		Peephole optimization , Register allocation and assignment
72	13-09-2017		Previous Papers Solving
73	14-09-2017		**REVISION THROUGH NPTEL VIDEO / PPT**
74	16-09-2017		**TUTORIAL**
75	16-09-2017		**TUTORIAL**
76	18-09-2017		**CLASS TEST- IV**
77	19-09-2017	VI	**OBJECTIVE TEST- IV, Machine independent code optimization**
78	20-09-2017		Semantic Preserving Transformations
79	21-09-2017		Global Common Sub Expr. Elimination, Copy Propagation
80	23-09-2017		**TUTORIAL**
81	23-09-2017		**TUTORIAL**
82	25-09-2017		Dead Code Elimination
83	26-09-2017		Constant Folding
84	27-09-2017		Strength Reduction
85	03-10-2017		Loop Optimization Techniques
86	04-10-2017		Instruction scheduling, Inter Procedural Optimization
87	05-10-2017		**REVISION THROUGH NPTEL VIDEO / PPT**
88	07-10-2017		**TUTORIAL**
89	07-10-2017		**TUTORIAL**
90	09-10-2017		Revision
91	10-10-2017		Revision
92	11-10-2017		Revision
93	12-10-2017		Revision
94	14-10-2017		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 Louden, CENGAGE.

5. Implementations of Compiler, A new approach to Compilers including the algebraic methods, Yunlinsu, SPRINGER.

FACULTY **HEAD OF THE DEPARTMENT**