

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

SUBJECT: FORMAL LANGUAGES & AUTOMATA THEORY ACADEMIC YEAR: 2017-18
FACULTY: Mr. T. KRISHNA KISHORE YEAR-SEM: II – II Semester 'B'
No. of Lectures per Week: 4+1*(Tutorial)

S.No.	Date	UNIT	TOPIC TO BE COVERED
1	20-11-2017	I	Finite Automata: Why Study Automata Theory?
2	21-11-2017		The Central Concepts of Automata Theory
3	22-11-2017		Automation, Finite Automata, Transition Systems
4	23-11-2017		Acceptance of a String by a Finite Automata
5	25-11-2017		DFA, Design of DFAs NFA, Design of NFA ,
6	27-11-2017		Equivalence of DFA and NFA , Conversion of NFA into DFA
7	28-11-2017		Finite Automata with E-Transition
8	29-11-2017		Minimization of Finite Automata
9	30-11-2017		Mealy and Moore Machines, Applications & Limitation of Finite Automata
10	02-12-2017		
11	04-12-2017	II	OBJECTIVE TEST- I, Regular Expressions
12	05-12-2017		Regular Sets, Identity Rules
13	06-12-2017		Equivalence of two REs
14	07-12-2017		TUTORIAL
15	11-12-2017		Manipulations of Regular Expressions, Inter Conversion
16	12-12-2017		Equivalence between Finite Automata and Regular Expressions
17	13-12-2017		Pumping Lemma
18	14-12-2017		TUTORIAL
19	16-12-2017		Closer Properties
20	18-12-2017		Applications of Regular Expressions
21	19-12-2017		Finite Automata and Regular Grammars
22	20-12-2017		Regular Expressions and Regular Grammars
23	21-12-2017		TUTORIAL
24	23-12-2017		CLASS TEST - II
25	26-12-2017	III	OBJECTIVE TEST- II, Context Free Grammars, Formal Languages
26	27-12-2017		Grammars, Classification of Grammars,
27	28-12-2017		TUTORIAL
28	30-12-2017		Chomsky Hierarchy Theorem
29	01-01-2018		CFG, Leftmost and Rightmost Derivations, Parse Trees
30	02-01-2018		Ambiguous Grammars, Simplification of Context Free Grammars
31	03-01-2018		Elimination of Useless Symbols, Null and Unit Productions
32	04-01-2018		TUTORIAL
33	06-01-2018		Normal Forms for Context Free Grammars – CNF
34	08-01-2018		Normal Forms for Context Free Grammars - GNF
35	09-01-2018		Pumping Lemma, Closure Properties
36	10-01-2018		Applications of Context Free Grammars
37	11-01-2018		TUTORIAL
38	17-01-2018		REVISION
39	18-01-2018		REVISION
40	20-01-2018		REVISION
41	22-01-2018		REVISION
42	23-01-2018		REVISION
43	24-01-2018	IV	Pushdown Automata: Definition, Model, Graphical Notation
44	25-01-2018		TUTORIAL
45	27-01-2018		Instantaneous Description, Language Acceptance, Design
46	29-01-2018		Deterministic and Non – Deterministic Pushdown Automata
47	30-01-2018		Equivalence of Pushdown Automata and Context Free Grammars

48	31-01-2018		Conversion of Pushdown Automata and Context Free Grammars	
49	01-02-2018		TUTORIAL	
50	03-02-2018		Two Stack Pushdown Automata	
51	05-02-2018		Application of Pushdown Automata.	
52	06-02-2018		CLASS TEST - III	
53	07-02-2018	V	OBJECTIVE TEST- III, Turning Machine : Definition, Model	
54	08-02-2018		TUTORIAL	
55	10-02-2018		Representation of Turing Machines	
56	14-02-2018		Instantaneous Descriptions	
57	15-02-2018		TUTORIAL	
58	17-02-2018		Transition Tables and Transition Diagrams	
59	19-02-2018		Language of a Turing Machine, Design of Turing Machines	
60	20-02-2018		Techniques for Turing Machine Construction	
61	21-02-2018		Types of Turing Machines, Church's Thesis	
62	22-02-2018		TUTORIAL	
63	24-02-2018		Universal Turing Machine, Restricted Turing Machine	
64	26-02-2018		CLASS TEST - IV	
65	27-02-2018		VI	OBJECTIVE TEST- IV, Computability
66	28-02-2018			Decidable and Un-decidable Problems
67	01-03-2018	TUTORIAL		
68	03-03-2018	Halting Problem of TM, Post's Correspondence Problem		
69	05-03-2018	Modified Post's Correspondence Problem		
70	06-03-2018	Classes of P and NP, NP- Hard and NP-Complete Problems		
71	07-03-2018		REVISION	
72	08-03-2018		REVISION	
73	12-03-2018		REVISION	
74	13-03-2018		REVISION	
75	14-03-2018		REVISION	
76	15-03-2018		REVISION	
77	17-03-2018		REVISION	
78	19-03-2018		REVISION	
79	20-03-2018		REVISION	
80	21-03-2018		REVISION	
81	22-03-2018		REVISION	
82	24-03-2018		REVISION	

Text Books:

1. Introduction to Automata Theory, Languages and Computation, J.E.Hopcroft, R.Motwani and J.D.Ullman, 3rd Edition, Pearson, 2008.
2. Theory of Computer Science-Automata, Languages and Computation, K.L.P.Mishra and N.Chandrasekharan, 3rd Edition, PHI, 2007.

Reference Books:

1. Formal Language and Automata Theory, K.V.N.Sunitha and N.Kalyani, Pearson, 2015.
2. Introduction to Automata Theory, Formal Languages and Computation, Shyamalendu Kandar, Pearson, 2013.
3. Theory of Computation, V.Kulkarni, Oxford University Press, 2013.
4. Theory of Automata, Languages and Computation, Rajendra Kumar, McGraw Hill, 2014.

FACULTY**HEAD OF THE DEPARTMENT**