

Department of Computer Science and Engineering

SEMESTER : IV C	NAME OF THE FACULTY : Ms. Savitha S
BRANCH : CSE	DATE OF COMMENCEMENT : 13/02/2017
SUBJECT : Analog and Digital Electronics	DATE OF CLOSING : 02/06/2017
SUBJECT CODE: 15CS32	CLASS STRENGTH :64
NO OF HRS/WK: 6	TOTAL HRS : 62

Sessi on No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignm ents/ Tests planned for the chapter	Topics covered As per plan
1	1/1	13/02/17	MODULE 1: Introduction	Board, chalk, duster		
2	2/1	14/02/17	Data Communications, Networks	„		
3	3/1	15/02/17	Network Types	„		
4	4/1	16/02/17	Internet History,	„		
5	5/1	17/02/17	Standards and Administration,	„	Assignm ent-1	
6	6/1	18/02/17	Networks Models: Protocol Layering, TCP/IP Protocol suite,	„		
7	7/1	21/02/17	The OSI model,	„		
8	8/1	22/02/17	Introduction to Physical Layer-1: Data and Signals	„		
9	9/1	23/02/17	Digital Signals, Rate limits, Performance	„		
10	10/1	27/02/17	Transmission Impairment Data	Board, chalk, duster		
11	11/1	28/02/17	Digital Transmission: Digital to digital conversion (Only Line coding: Polar, Bipolar and Manchester coding).	„		

12	12/1	02/03/17	Digital Transmission: Digital to digital conversion (Only Line coding: Polar, Bipolar and Manchester coding).	„		
13	1/2	06/03/17	MODULE-2 : Physical Layer-2 Analog to digital conversion (only PCM)	„		
14	2/2	07/03/17	Analog to digital conversion (only PCM)	„		
15	3/2	08/03/17	Transmission Modes,	„		
16	4/2	09/03/17	Transmission Modes,			
17	5/2	11/03/17	Analog Transmission: Digital to analog conversion	„	Assignment -II	
18	6/2	13/03/17	Analog Transmission: Digital to analog conversion			
19	7/2	14/03/17	Bandwidth Utilization: Multiplexing and Spread Spectrum,			
20	8/2	15/03/17	Bandwidth Utilization: Multiplexing and Spread Spectrum,			
21	9/2	16/03/17	Switching: Introduction,	„		
22	10/2	18/03/17	Circuit Switched Networks	„		
23	11/2	20/03/17	Circuit Switched Networks	„		
24	12/2	21/03/17	Packet switching.	„		
25	13/2	22/03/17	Packet switching.			
26	1/3	23/03/17	MODULE-3 : Error Detection and Correction: Introduction	Board, chalk, duster		
27	2/3	31/03/17	Revision	„		
28	3/3	01/04/17	Revision	„		
29	4/3	03/04/17	Block coding	„		
30	5/3	04/04/17	Cyclic codes,	„		
31	6/3	05/04/17	Checksum,			
32	7/3	07/04/17	Checksum,			
33	8/3	08/04/17	Forward error correction,	„		
34	9/3	10/04/17	Data link control: DLC services	„		
35	10/3	11/04/17	Data link layer protocols	„		
36	11/3	12/04/17	HDLC	„		
37	12/3	17/04/17	Point to Point protocol (Framing, Transition phases only).	„		

38	13/3	18/04/17	Point to Point protocol (Framing, Transition phases only).	„		
39	1/4	19/04/17	MODULE-4 : Media Access control	„		
40	2/4	20/04/17	Random Access,	„		
41	3/4	21/04/17	Controlled Access and Channelization,	„		
42	4/4	24/04/17	Wired LANs Ethernet: Ethernet Protocol,	„		
43	5/4	25/04/17	Standard Ethernet	„	Assignment -VI	
44	6/4	26/04/17	Fast Ethernet,	„		
45	7/4	27/04/17	Gigabit Ethernet and 10 Gigabit Ethernet,	„		
46	8/4	28/04/17	Wireless LANs: Introduction,	„		
47	9/4	03/05/17	IEEE 802.11 Project	„		
48	10/4	04/05/17	IEEE 802.11 Project	„		
49	12/4	05/05/17	Bluetooth			
50	13/4	11/05/17	Revision	„		
51	1/5	12/05/17	Bluetooth			
52	2/5	15/05/17	MODULE 5: Introduction to Other wireless Networks	„		
53	3/5	16/05/17	WIMAX,	“		
54	4/5	17/05/17	Cellular Telephony	„	Assignment -V	
55	5/5	18/05/17	Satellite networks	„		
56	6/5	19/05/17	Network layer Protocols : Internet Protocol	„		
57	7/5	22/05/17	ICMPv4, Mobile IP	„		
58	8/5	23/05/17	Next generation IP: IPv6 addressing,	„		
59	9/5	24/05/17	The IPv6 Protocol , Transition from IPv4 to IPv6	„		

Syllabus for Internal Assessment Tests (IAT)*

IAT #	Syllabus
IAT-1	Class # 01 – 28

IAT-2	Class # 29-50
IAT-3	Class # 51-59

*: See calendar of events for the schedules of IATs.

Literature:

Book Type	Code	Author & Title	Publication info	
			Edition & Publisher	ISBN #
Text Book	TB1	Behrouz A. Forouzan,: Data Communication and Networking,	5th Edition Tata McGraw-Hill, 2013..	978-0-07-063414-5
References	RB1	Alberto Leon-Garcia and Indra Widjaja: Communication Networks - Fundamental Concepts and Key architectures,	2nd Edition Tata McGraw-Hill, 2004..	978-0070228399
References	RB2	William Stallings: Data and Computer Communication	8th Edition, Pearson Education, 2007..	9780132433105
References	RB3	Larry L. Peterson and Bruce S. Davie: Computer Networks – A Systems Approach	4th Edition, Elsevier, 2007	978-0123705488
References	RB4	Nader F. Mir: Computer and Communication Networks,	Pearson Education, 2007.	978-0131389106

Signature of faculty

Signature of HOD

Signature of Principal



#132, AECS Layout, IT Park Road, Kundalahalli, Bangalore – 560 037
T:+9180 28524466 / 77

CMR INSTITUTE
OF TECHNOLOGY

Session wise – Course Plan

DEPARTMENT OF COMPUTER SCIENCE & ENGG

Semester	IV	Name of the faculty	Dr. Jhansi Rani P
Branch	CSE	Date of commencement	13/02/2017
Subject	DESIGN AND ANALYSIS OF ALGORITHMS	Date of Closing	06/06/2017
Subject code	15CS43	Section & Class Strength	A (61)
No of hours/week	5/1	Total hours	60 hrs

Session No	Chapter no (No of hrs planned for the chapter)	Date	Topics planned for the session	Teaching Aids	Assignment s/ Tests planned for the chapter	Topics covered As per plan
1	1/1	13/02/2017	Introduction, Prerequisites, course objectives, course outcomes	Board, chalk, duster		
2	2/1	15/02/2017	What is an Algorithm?, Algorithm Specification, Analysis Framework	Board, chalk, duster		
3	3/1	15/02/2017	Performance Analysis: Space complexity,	Board, chalk, duster		
4	4/1	16/02/2017	Time complexity	Board, chalk, duster		
5	5/1	18/02/2017	Asymptotic Notations: Big-Oh notation (O), Omega notation (Ω), Theta notation (Θ), and Little-oh notation (o)	Board, chalk, duster		
6	6/1	20/02/2017	Mathematical analysis of Non-Recursive Algorithms	Board, chalk, duster		
7	7/1	22/02/2017	Mathematical analysis of recursive Algorithms with Examples	Board, chalk, duster		
8	8/1	22/02/2017	Important Problem Types: Sorting, Searching, String processing, Graph Problems, Combinatorial Problems	Board, chalk, duster	Assignment on MODULE 1	
9	9/1	23/02/2017	Fundamental Data Structures: Stacks, Queues			
10	10/1	28/02/2017	Graphs, Trees, Sets and Dictionaries.	Board, chalk, duster		
11	1/2	01/03/2017	Divide and Conquer: General method	Board, chalk, duster		
12	2/2	06/03/2017	Binary search, Recurrence equation for divide and conquer	PPT		
13	3/2	06/03/2017	Finding the maximum and minimum	Board, chalk, duster		
14	4/2	07/03/2017	Merge sort	Board, chalk, duster		

15	5/2	09/03/2017	Merge sort	Board, chalk, duster	Assignment on MODULE 2	
16	6/2	10/03/2017	Quick sort	Board, chalk, duster		
17	7/2	13/03/2017	Quick sort	Board, chalk, duster		
18	8/2	13/03/2017	Strassen's matrix multiplication	Board, chalk, duster		
19	9/2	14/03/2017	Advantages and Disadvantages of divide and conquer	Board, chalk, duster		
20	10/2	16/03/2017	Topological Sort	Board, chalk, duster		
21	1/3	17/03/2017	Greedy Method: General method	Board, chalk, duster		
22	2/3	20/03/2017	Coin Change Problem	Board, chalk, duster		
23	3/3	20/03/2017	Knapsack Problem	Board, chalk, duster		
24	4/3	21/03/2017	Job sequencing with deadlines	Board, chalk, duster		
25	5/3	23/03/2017	Minimum cost spanning trees: Prim's Algorithm,	Board, chalk, duster		
26	6/3	24/03/2017	Kruskal's Algorithm	Board, chalk, duster		
27	7/3	01/04/2017	Dijkstra's Algorithm	Board, chalk, duster	Assignment on MODULE 3	
28	8/3	01/04/2017	Huffman Trees and Codes	Board, chalk, duster		
29	9/3	03/04/2017	Heaps	Board, chalk, duster		
30	10/3	05/04/2017	Heap Sort	Board, chalk, duster		
31	1/4	06/04/2017	Dynamic Programming: General method with	Board, chalk,		

			Examples, (T2:5.1, 5.2). Transitive Closure ., All Pairs Shortest Paths ., ((T1:8.2, 8.3, 8.4), Bellman-Ford Algorithm (T2:5.4), Travelling Sales Person problem (T2:5.9), Reliability design	duster		
32	2/4	08/04/2017	Multistage Graphs	Board, chalk, duster		
33	3/4	08/04/2017	Warshall's Algorithm	Board, chalk, duster		
34	4/4	10/04/2017	Floyd's Algorithm	Board, chalk, duster		
35	5/4	12/04/2017	Optimal Binary Search Trees	Board, chalk, duster		
36	6/4	13/04/2017	Optimal Binary Search Trees	Board, chalk, duster		
37	7/4	18/04/2017	Knapsack problem	Board, chalk, duster	Assignment on MODULE 4	
38	8/4	18/04/2017	Knapsack problem	Board, chalk, duster		
39	9/4	19/04/2017	Bellman-Ford Algorithm	Board, chalk, duster		
40	10/4	21/04/2017	Bellman-Ford Algorithm	Board, chalk, duster		
41	11/4	22/04/2017	Travelling Sales Person problem	Board, chalk, duster		
42	12/4	25/04/2017	Reliability design	Board, chalk, duster		
43	1/5	25/04/2017	Backtracking : General method			
44	2/5	26/04/2017	N-Queens problem	Board, chalk, duster		
45	3/5	28/04/2017	N-Queens problem	Board, chalk, duster		

46	4/5	02/05/2017	Sum of subsets problem	Board, chalk, duster		
47	5/5	04/05/2017	Graph coloring	Board, chalk, duster		
48	6/5	04/05/2017	Hamiltonian cycles	Board, chalk, duster		
49	7/5	05/05/2017	Assignment Problem	Board, chalk, duster		
50	8/5	12/05/2017	Travelling Sales Person problem	Board, chalk, duster		
51	9/5	13/05/2017	0/1 Knapsack problem	Board, chalk, duster	Assignment on MODULE 5	
52	10/5	16/05/2017	LC Branch and Bound solution	Board, chalk, duster		
53	11/5	16/05/2017	FIFO Branch and Bound solution	Board, chalk, duster		
54	12/5	17/05/2017	NP-Complete and NP-Hard problems: Basic concepts, non-deterministic algorithms, P, NP,	Board, chalk, duster		
55	13/5	19/05/2017	NP-Complete, and NP-Hard classes	Board, chalk, duster		
56	1/1-5	20/05/2017	Examples	Board, chalk, duster		
57	2/1-5	23/05/2017	Examples	Board, chalk, duster		
58	3/1-5	23/05/2017	Revision	Board, chalk, duster		
59	4/1-5	24/05/2017	Revision	Board, chalk, duster		
60	5/1-5	24/05/2017	Revision	Board, chalk, duster		

Syllabus for Internal Assessment:

Assessment #	Syllabus
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IAT1	Class # 01 – 26
IAT2	Class # 27- 49
IMP	Class # 50 - 60

Literature:

Book Type	Code	Author & Title	Publication information	
			Edition & Publisher	ISBN #
Text Book	TB1	Introduction to the Design and Analysis of Algorithms, Anany Levitin:, 2nd Edition, 2009. Pearson.	2 nd Edition, Pearson Education, 2007.	978 81 317 1837 7
Text Book	TB2	Computer Algorithms/C++, Ellis Horowitz, Satraj Sahni and Rajasekaran, 2nd Edition, 2014, Universities Press	2 nd Edition, Universities Press, 2007.	978 81 7371 612 6
Reference	RB1	Introduction to Algorithms, Thomas H. Cormen, Charles E. Leiserson, Ronal L. Rivest, Clifford Stein, 3rd Edition, PHI	3 rd Edition, PHI, 2010.	0-07-013151-1
Reference	RB2	Design and Analysis of Algorithms , S. Sridhar, Oxford (Higher Education)	Tata McGraw Hill, 2005.	10: 0071243461

Signature of In charge

HOD-CSE



#132, AECS Layout, IT Park Road, Kundalahalli, Bangalore – 560 037
T:+9180 28524466 / 77

CMR INSTITUTE
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Session wise – Course Plan

DEPARTMENT OF COMPUTER SCIENCE & ENGG

Semester	IV	Name of the faculty	Ms. Bharti Sharma
Branch	CSE	Date of commencement	13/02/2017
Subject	ENGINEERING MATHEMATICS -4	Date of Closing	06/06/2017
Subject code	15MAT41	Section & Class Strength	A (62)
No of hours/week	6/1	Total hours	70 hrs

Session No	Chapter no (No of hrs planed for the chapter)	Date	Topics planned for the session	Teaching Aids	Assignment s/ Tests planned for the chapter	Topics covered As per plan

1	1/1	14/02/2017	Pre-requisites for differential equation	Board, chalk, duster		
2	2/1	15/02/2017	Taylor's series expansion for first order ODE	Board, chalk, duster		
3	3/1	15/02/2017	Problems on the above method	Board, chalk, duster		
4	4/1	16/02/2017	Euler's and modified Euler's methods	Board, chalk, duster		
5	5/1	17/02/2017	Problems on the above method	Board, chalk, duster		
6	6/1	18/02/2017	R-K fourth order method	Board, chalk, duster		
7	7/1	21/02/2017	Problems on the above method	Board, chalk, duster	Assignment on MODULE 1	
8	8/1	22/02/2017	Milne's and Adams- Bashforth methods	Board, chalk, duster		
9	9/1	22/02/2017	Problems on the above method	Board, chalk, duster		
10	1/2	23/02/2017	Solution of second order o.d.e : Runge-Kutta method and problems	Board, chalk, duster		
11	2/2	27/02/2017	Milne's method	Board, chalk, duster		
12	3/2	28/02/2017	Problems on the above method	Board, chalk, duster		
13	4/2	02/03/2017	Class Test	Board, chalk, duster		
14	1/3	06/03/2017	Prerequisites for complex numbers	Board, chalk, duster		
15	2/3	06/03/2017	Prerequisites for <i>Functions of a complex variable</i>	Board, chalk, duster		
16	3/3	07/03/2017	Function of a complex variable, limits, continuity, differentiability	Board, chalk, duster		
17	4/3	08/03/2017	Analytic functions-Cauchy-Riemann	Board, chalk,		

			equations in Cartesian form	duster		
18	5/3	09/03/2017	Problems on the above	Board, chalk, duster		
19	6/3	11/03/2017	Cauchy-Riemann equations in polar form	Board, chalk, duster		
20	7/3	13/03/2017	Problems on analytic functions	Board, chalk, duster		
21	8/3	13/03/2017	Construction of analytic functions	Board, chalk, duster		
22	9/3	14/03/2017	Properties of analytic functions	Board, chalk, duster		
23	10/3	15/03/2017	Line integral of a complex function	Board, chalk, duster		
24	11/3	16/03/2017	Problems on line integral	Board, chalk, duster	Assignment on MODULE 3	
25	12/3	18/03/2017	Cauchy's theorem	Board, chalk, duster		
26	13/3	20/03/2017	Cauchy's integral formula	Board, chalk, duster		
27	14/3	20/03/2017	Singularities, poles and residues	Board, chalk, duster		
28	15/3	21/03/2017	Cauchy's residue theorem	Board, chalk, duster		
29	16/3	22/03/2017	Evaluation of integrals	Board, chalk, duster		
30	17/3	23/03/2017	Bilinear transformations	Board, chalk, duster		
31	18/3	31/03/2017	The mappings $w = z^2$, $w = e^z$	Board, chalk, duster		
32	19/3	01/04/2017	The mapping $w = z + (1/z)$ ($z \neq 0$)	Board, chalk, duster		
33	20/3	01/04/2017	Test	Board, chalk, duster		

34	1/4	03/04/2017	Probability prerequisites	Board, chalk, duster		
35	2/4	04/04/2017	Random variables and probability distributions	Board, chalk, duster		
36	3/4	05/04/2017	Discrete probability distributions- mean and variance	Board, chalk, duster		
37	4/4	07/04/2017	Discrete probability distributions- problems	Board, chalk, duster	Assignment on MODULE 4	
38	5/4	08/04/2017	Continuous probability distributions- mean and variance, problems	Board, chalk, duster		
39	6/4	08/04/2017	Binomial Distribution, mean and variance of binomial distribution	Board, chalk, duster		
40	7/4	10/04/2017	Problems on binomial distribution	Board, chalk, duster		
41	8/4	11/04/2017	Poisson distribution, mean variance of Poisson distribution	Board, chalk, duster		
42	9/4	12/04/2017	Exponential distribution	Board, chalk, duster		
43	10/4	17/04/2017	Normal distribution, mean and variance of normal distribution	Board, chalk, duster		
44	11/4	18/04/2017	Problems on normal distribution	Board, chalk, duster		
45	12/4	18/04/2017	Test	Board, chalk, duster		
46	13/4	19/04/2017	Joint probability distributions, expectation, covariance, correlation coefficient	Board, chalk, duster		
47	14/4	20/04/2017	Problems on joint probability distributions	Board, chalk, duster		
48	1/5	21/04/2017	Stochastic processes- introduction	Board, chalk, duster		
49	2/5	24/04/2017	Markov chain, transition matrix	Board, chalk, duster		
50	3/5	25/04/2017	State classification	Board, chalk,		

				duster		
51	4/5	25/04/2017	Higher transition probabilities, problems	Board, chalk, duster		
52	5/5	26/04/2017	Test	Board, chalk, duster		
53	6/5	27/04/2017	Sampling theory- introduction, sampling distribution of means and proportions	Board, chalk, duster	Assignment on MODULE 5	
54	7/5	28/04/2017	Test of hypothesis and confidence intervals for means and proportions	Board, chalk, duster		
55	8/5	03/05/2017	Test of hypothesis for difference of means and proportions	Board, chalk, duster		
56	9/5	04/05/2017	Problems on hypothesis testing	Board, chalk, duster		
57	10/5	04/05/2017	Small samples- Student's t-distribution	Board, chalk, duster		
58	11/5	05/05/2017	Chi-square distribution	Board, chalk, duster		
59	12/5	11/05/2017	Problem solving	Board, chalk, duster		
60	13/5	12/05/2017	Problem solving	Board, chalk, duster		
61	14/5	15/05/2017	Test	Board, chalk, duster		
62	5/2	16/05/2017	Series solution of second order differentia equations by Frobenius method.	Board, chalk, duster		
63	6/2	16/05/2017	Series solution of Bessel's differential equation leading to $J_n(x)$	Board, chalk, duster		
64	7/2	17/05/2017	Properties of Bessel's functions	Board, chalk, duster		
65	8/2	18/05/2017	Recurrence relations	Board, chalk, duster	Assignment on MODULE 2	
66	9/2	19/05/2017	Orthogonality	Board, chalk,		

				duster		
67	10/2	22/05/2017	Series solution of Legendre's differential equation leading to $P_n(x)$	Board, chalk, duster		
68	11/2	23/05/2017	Rodrigue's formula, problems.	Board, chalk, duster		
69	12/2	23/05/2017	Problems on Legendre polynomials	Board, chalk, duster		
70	13/2	24/05/2017	Class test	Board, chalk, duster		

Syllabus for Internal Assessment:


Assessment #	Syllabus
IAT1	1-30
IAT2	31-52
IMP	53-70

Literature:

Book Type	Code	Author & Title	Publication information	
			Edition & Publisher	ISBN #
Text Book	TB1	B.S. Grewal, Higher Engineering Mathematics, Latest Edition, Khanna publishers	Latest edition, Khanna publications	8174091955
Text Book	TB2	Erwin Kreyszig, Advanced Engineering Mathematics	Latest Edition Wiley India publishers	978812653135
References	RB1	B.V Ramana, Higher Engineering Mathematics,.	Latest Edition, Tata Mc. Graw Hill Publications	---
References	RB2	Peter V . O'Neil, Engineering Mathematics.	Cengage Learning India Pvt. Ltd. Publishers	---
References	RB3	Dr. D.S.C , Engineering Mathematics III	5 th Edition 2011 6 th edition 2016	978-81-7686-675-4

Signature of In charge

HOD-CSE

CMR Institute of Technology, Bangalore			
Department: CSE			
Semester: IV	Section(s): C, D (CSE)		
Lab Name: MICROPROCESSOR & MICROCONTROLLERS	Code: 15CS44	CLASSES/week: 06	
Course Instructor(s): Mrs. Preethi A			
Course duration: Jan-2017 to May-2017			Even Sem 2017

Class #	Reference Literature	Topic	Percentage of portion covered	
			Reference	Cumulative
1-12	Text book 1 : Ch 1: 1.1 to 1.7, Ch 2: 2.1 to 2.7	The x86 microprocessor: Brief history of the x86 family, Inside the 8088/86, Introduction to assembly programming, Introduction to Program Segments, The Stack, Flag register, x86 Addressing Modes. Assembly language programming: Directives & a Sample Program, Assemble, Link & Run a program, More Sample programs, Control Transfer Instructions, Data Types and Data Definition, Full Segment Definition, Flowcharts and Pseudo code.	20%	20%
13-24	Text book 1: Ch 3: 3.1 to 3.5, Ch 4: 4.1, 4.2 Chapter 14: 14.1 and 14.2	x86: Instructions sets description, Arithmetic and logic instructions and programs: Unsigned Addition and Subtraction, Unsigned Multiplication and Division, Logic Instructions, BCD and ASCII conversion, Rotate Instructions. INT 21H and INT 10H Programming: Bios INT 10H Programming, DOS Interrupt 21H. 8088/86 Interrupts, x86 PC and Interrupt Assignment. Text book 1: Ch 3: 3.1 to 3.5, Ch 4: 4.1, 4.2 Chapter 14: 14.1 and 14.2	20%	40%
25-36	Text book 1: Ch 6: 6.1, 6.2. Ch 10: 10.2, 10.4, 10.5. Ch 11: 11.1 to 11.4	Signed Numbers and Strings: Signed number Arithmetic Operations, String operations. Memory and Memory interfacing: Memory address decoding, data integrity in RAM and ROM, 16-bit memory interfacing. 8255 I/O programming: I/O addresses MAP of x86 PC's, programming and interfacing the 8255.	20%	60%
37-48	Text book 2: Ch 1: 1.1 to 1.4, Ch 2: 2.1 to 2.5	Microprocessors versus Microcontrollers, ARM Embedded Systems : The RISC design philosophy, The ARM Design Philosophy, Embedded System Hardware, Embedded System Software, ARM Processor Fundamentals : Registers , Current Program Status Register , Pipeline, Exceptions, Interrupts, and the Vector Table , Core Extensions	20%	80%

49-60	Text book 2: Ch 3:3.1 to 3.6 (Excluding 3.5.2)	Introduction to the ARM Instruction Set : Data Processing Instructions , Branch Instructions, Software Interrupt Instructions, Program Status Register Instructions, Coprocessor Instructions, Loading Constants, Simple programming exercises.	20%	100%
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- **Syllabus for Internal Assessment Test**

Internal Assessment Test	Syllabus
T1	Class # 01 – 24
T2	Class # 25 – 48
T3 (Preparatory test)	Class # 49-60, some important topics from T1 and/or T2

Literature:

Book Type	Code	Author & Title	Publication info	
			Edition&Publisher	ISBN #
TEXT BOOK	TB1	Muhammad Ali Mazidi, Janice Gillispie Mazidi, Danny Causey, The x86 PC Assembly Language Design and Interfacing,	5th Edition, Pearson, 2013.	978-81-317-3441-4
TEXT BOOK	TB2	ARM system developers guide , Andrew N Sloss, Dominic Symes and Chris Wright,	Elsevier, Morgan Kaufman publishers, 2008.	
REFERANCE BOOK	RF1	Douglas V. Hall, 'Microprocessors and interfacing'	Tata McGraw-Hill	0-07-060167
REFERANCE BOOK	RF2	K. Udaya Kumar & B.S. Umashankar : Advanced Microprocessors & IBM-PC Assembly Language Programming	TMH 2003.	

T: +9180 28524466 / 77

Department of Computer Science and Engineering

SEMESTER	: IV	NAME OF THE FACULTY	: POORNIMA HN
BRANCH	: CSE	DATE OF COMMENCEMENT	: 13/02/2017
SUBJECT	: OBJECT ORIENTED CONCEPTS	DATE OF CLOSING	: 02/06/2017
SUBJECT CODE	: 15CS45	CLASS STRENGTH	: 61
NO OF HRS/WK	: 5	TOTAL HRS	: 58

Course objectives: This course will enable students to

- Learn fundamental features of object oriented language and JAVA
- Set up Java JDK environment to create, debug and run simple Java programs.
- Create multi-threaded programs and event handling mechanisms.
- Introduce event driven Graphical User Interface (GUI) programming using applets and swings.

Session No	Chapter no (No of hrs planned for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignm ents/ Tests planned for the chapter	Topics covere d As per plan
1	1/1	13/2/2017	Introduction to Object Oriented Concepts :Syllabus overview	Board, chalk, duster		
2	2/1	14/2/2017	A Review of structures	Board, chalk, duster		
3	3/1	15/2/2017	Procedure–Oriented Programming system, Object Oriented Programming System	Board, chalk, duster		
4	4/1	17/2/2017	Comparison of Object Oriented Language with C, Console I/O	Board, chalk, duster		
5	5/1	18/2/2017	Variables and reference variables Function Prototyping,	Board, chalk,		

			Function Overloading	duster		
6	6/1	20/2/2017	Class and Objects: Introduction Member functions and data	Board, chalk, duster		
7	7/1	21/2/2017	Objects and functions	Board, chalk, duster		
8	8/1	22/2/2017	Objects and arrays, Namespaces, Nested classes	Board, chalk, duster		
9	9/1	27/2/2017	Constructors, Destructors.	Board, chalk, duster		
10	10/1	28/2/2017	Revision of full Module 1	Projector		
11	11/1	1/3/2017	Quiz	Projector		
12	12/1	2/3/2017	Module Test	Paper	Assignm ent 1	
13	1/2	6/3/2017	Introduction to Java: <ul style="list-style-type: none"> • Java's magic: the Byte code • Java Development Kit (JDK) • The Java Buzzwords 	Board, chalk, duster Projector.		
14	2/2	8/3/2017	<ul style="list-style-type: none"> • Object-oriented programming • Simple Java programs 	Board, chalk, duster		
15	3/2	9/3/2017	<ul style="list-style-type: none"> • Object-oriented programming • Simple Java programs 	Board, chalk, duster		
16	4/2	10/3/2017	Data types Variables	Board, chalk, duster Projector		
17	5/2	11/3/2017	Arrays	Board, chalk, duster		
18	6/2	13/3/2017	Operators	Board, chalk, duster Projector		
19	7/2	15/3/2017	Control Statements	Board, chalk, duster		

20	8/2	16/3/2017	Control Statements	Projector		
21	9/2	17/3/2017	Revision of Module 2			
22	10/2	18/3/2017	Quiz	Projector	Assignment 2	
23	1/3	20/3/2017	Classes, Inheritance, Exceptions, Packages and Interfaces: Classes: Classes fundamentals, Declaring objects	Board, chalk, duster		
24	2/3	22/3/2017	Constructors	Board, chalk, duster		
25	3/3	23/3/2017	This keyword, garbage collection.	Board, chalk, duster		
26	4/3	24/3/2017	Inheritance: inheritance basics	Board, chalk, duster	Assignment- I	
27	5/3	31/3/2017	using super, creating multi level hierarchy	Board, chalk, duster		
28	6/3	1/4/2017	Method overriding. Exception handling: Exception handling in Java	Board, chalk, duster		
29	7/3	4/4/2017	Packages, Access Protection, Importing Packages,	Board, chalk, duster		
30	8/3	5/4/2017	Packages, Access Protection, Importing Packages,	Board, chalk, duster		
31	9/3	6/4/2017	Interfaces.	Board, chalk, duster		
32	10/3	7/4/2017	Revision of Module 3	Board, chalk, duster		
33	11/3	8/4/2017	Quiz	Projector		
34	12/3	11/4/2017	Unit Test	Paper	Assignment 3	
35	1/4	12/4/2017	Multi Threaded Programming, Event Handling: Multi Threaded Programming: What are threads? How to make the classes threadable	Board, chalk, duster		

36	2/4	13/4/2017	Extending threads, Implementing runnable	Board, chalk, duster		
37	3 /4	17/4/2017	Synchronization, Changing state of the thread, Bounded buffer problems	Board, chalk, duster		
38	4/4	18/4/2017	Readwrite problem	Board, chalk, duster	Assignm ent –II	
39	5/4	20/4/2017	Producer consumer problems	Board, chalk, duster		
40	6/4	21/4/2017	Event Handling: Two event handling mechanisms	Board, chalk, duster		
41	7/4	22/4/2017	The delegation event model	Board, chalk, duster		
42	8/4	24/4/2017	Event classes, Sources of events,	Board, chalk, duster		
43	9/4	25/4/2017	Event listener interfaces	Board, chalk, duster		
44	10/4	27/4/2017	Using the delegation event model	Board, chalk, duster		
45	11/4	28/4/2017	Adapter classes, Inner classes.	Board, chalk, duster		
46	12/4	2/5/2017	Revision of Module 4	Projector		
47	1/5	3/5/2017	The Applet Class: Introduction, Two types of Applets, Applet basics	Board, chalk, duster	Assignm ent 4	
48	2/5	4/5/2017	Applet Architecture, An Applet skeleton, Simple Applet display methods	Board, chalk, duster		
49	3/5	11/5/2017	Requesting repainting, Using the Status Window	Board, chalk, duster		
50	4/5	12/5/2017	The HTML APPLET tag, Passing parameters to Applets	Board, chalk, duster		
51	5/5	13/5/2017	getDocumentbase() and getCodebase(), ApletContext and showDocument()	Board, chalk, duster		

52	6/5	15/5/2017	The AudioClip Interface, The AppletStub Interface, Output to the Console. Swings: The origins of Swing, Two key Swing features	Board, chalk, duster		
53	7/5	16/5/2017	Components and Containers, The Swing Packages, A simple Swing Application	Board, chalk, duster		
54	8/5	18/5/2017	Create a Swing Applet	Board, chalk, duster		
55	9/5	19/5/2017	JLabel and ImageIcon, JTextField	Board, chalk, duster		
56	10/5	20/5/2017	The Swing Buttons	Board, chalk, duster		
57	11/5	22/5/2017	JTabbedPane JScrollPane, JList JComboBox, JTable	Board, chalk, duster		
58	12/5	23/5/2017	Revision of Module 5	Projector		

Course Outcomes: After studying this course, students will be able to

- Explain the object-oriented concepts and JAVA.
- Develop computer programs to solve real world problems in Java.
- Develop simple GUI interfaces for a computer program to interact with users, and to understand the event-based GUI handling principles using Applets and swings.

Graduate Attributes

- Programming Knowledge
- Design/Development of Solutions
- Conduct Investigations of Complex Problems
- Life-Long Learning

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Syllabus for Internal Assessment Tests (IAT)

IAT #	Syllabus
IAT-1	Class # 01 – 23
IAT-2	Class # 24 – 46
IAT-3	Class # 47 – 62

* : See calendar of events for the schedules of IATs.

Literature:

Book Type	Code	Author & Title	Publication information	
			Edition // Publisher	ISBN #
Text Book	TB1	Sourav Sahay, Object Oriented Programming with C++	Oxford University Press,2006 (Chapters 1, 2, 4)	
Text Book	TB2	Herbert Schildt, Java The Complete Reference, 7th Edition	Tata McGraw Hill, 2007. (Chapters 1, 2, 3, 4, 5, 6, 8, 9,10, 11, 21, 22, 29, 30)	
Reference	RB1	Mahesh Bhawe and Sunil Patekar, "Programming with Java"	First Edition, Pearson Education,2008	ISBN:978813172 0806
Reference	RB1	Herbert Schildt, The Complete Reference C++	4th Edition, Tata McGraw Hill, 2003	
Reference	RB3	Stanley B.Lippmann, Josee Lajore, C++ Primer	4th Edition, Pearson Education, 2005	
Reference	RB4	Rajkumar Buyya,S Thamarasi selvi, xingchen chu, Object oriented Programming with java	Tata McGraw Hill education private limited	
Reference	RB5	Richard A Johnson, Introduction to Java Programming and OOAD	CENGAGE Learning	
Reference	RB6	E Balagurusamy, Programming with Java A primer	Tata McGraw Hill companies.	

Signature of faculty

Signature of HOD

Signature of Principal

Department of Computer Science and Engineering

SEMESTER : 4A
BRANCH : CSE
SUBJECT : SE
SUBJECT CODE : 15CS42
NO OF HRS/WK : 5

NAME OF THE FACULTY : Daminderjit Sunner
DATE OF COMMENCEMENT : 13.02.2017
DATE OF CLOSING : 24.05.2017
CLASS STRENGTH : 65
TOTAL LECTURES : 57

Sessi on No	Module no (No of lectures planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter
1	1/1	14/2/2017	Module 1: Discussion on Software Engineering introduction, Course Objectives, Course Outcomes and Graduate Attributes	Chalk n talk	Activity
2	2/1	16/2/2017	Software Crisis, Need for Software Engineering, Professional Software Development, FAQs of Software Engineering	„	
3	3/1	17/2/2017	FAQs of Software Engineering	-	
4	4/1	18/2/2017	SE and Web, SE ethics, Case study 3	„	
5	5/1	18/2/2017	Case study 1, Case study 2	„	
6	6/1	20/2/2017	Software Processes: Waterfall Model, Incremental Model, Spiral Model	„	
7	7/1	21/2/2017	Process activities	„	
8	8/1	28/2/2017	Requirements Engineering: Functional and non-functional Requirements, The software Requirements Document	„	Activity
9	9/1	28/2/2017	Requirements Specification, Requirements Engineering Processes	„	

10	10/1	1/3/2017	Requirements Elicitation and Analysis	„	
11	11/1	2/3/2017	Requirements validation, Requirements Management	„	
12	12/1	7/3/2017	Module 1 Summary and Quiz	„	Quiz and Assignment-1
13	1/2	9/3/2017	Module 2: System models introduction, Context models	„	
14	2/2	9/3/2017	Context models	„	
15	3/2	10/3/2017	Interaction models	„	
16	4/2	11/3/2017	Structural models	„	
17	5/2	14/3/2017	Behavioral models	„	
18	6/2	16/3/2017	Behavioral models	„	
19	7/2	16/3/2017	Model-driven engineering	„	
20	8/2	17/3/2017	Design and Implementation: Introduction to RUP	„	
21	9/2	18/3/2017	Design Principles: Object-oriented design using the UML	„	
22	10/2	21/3/2017	Object-oriented design using the UML	„	
23	11/2	23/3/2017	Object-oriented design using the UML	„	
24	12/2	23/3/2017	Design patterns, Implementation issues, Open source development	„	
25	13/2	24/3/2017	Module 2 Summary and Quiz	„	Quiz and Assignment-2
26	1/3	31/3/2017	Module 3: Software Testing introduction	„	
27	2/3	3/4/2017	Development testing	„	
28	3/3	5/4/2017	Development testing	„	
29	4/3	5/4/2017	Test-driven development, Release testing	„	
30	5/3	6/4/2017	User testing, Test Automation	„	
31	6/3	7/4/2017	Software Evolution: Introduction,	„	
32	7/3	10/4/2017	Evolution processes, Program evolution dynamics	„	
33	8/3	12/4/2017	Software maintenance	„	
34	9/3	13/4/2017	Software maintenance, Legacy system management	„	
35	10/3	17/4/2017	Module 3 Summary and Quiz	„	Quiz and Assignment-3
36	1/4	19/4/2017	Module 4: Introduction, Software Pricing	„	
37	2/4	21/4/2017	Plan-driven development	„	

38	3/4	21/4/2017	Project scheduling	„	
39	4/4	22/4/2017	Project scheduling	„	
40	5/4	24/4/2017	Estimation techniques	„	
41	6/4	26/4/2017	Estimation techniques	„	
42	7/4	28/4/2017	Quality management: Introduction, Software quality	„	
43	8/4	28/4/2017	Reviews and inspections	„	
44	9/4	2/5/2017	Software measurement and metrics	„	
45	10/4	3/5/2017	Software measurement and metrics	„	
46	11/4	5/5/2017	Software standards	„	
47	12/4	12/5/2017	Module 4 Summary and Quiz	„	Quiz and Assignment-4
48	1/5	12/5/2017	Module 5: Introduction, Coping with Change	„	
49	2/5	13/5/2017	The Agile Manifesto: Values and Principles	„	
50	3/5	15/5/2017	Plan-driven and agile development, Extreme Programming	„	
51	4/5	17/5/2017	Extreme Programming	„	
52	5/5	19/5/2017	Agile methods: SCRUM	„	
53	6/5	19/5/2017	Agile methods: SCRUM	„	
54	7/5	20/5/2017	Agile methods: SCRUM	„	
55	8/5	22/5/2017	Agile project management	„	
56	9/5	24/5/2017	Scaling agile methods, Module 5 Summary and Quiz	„	Quiz and Assignment-5

Quiz will comprise different categories like- Fish bone, connection game, gallery walk, jeopardy, etc. based on the type of the chapter. More activities may be added according to topic discussion in class and available time.

Syllabus for Sessionals:

Sessional #	Syllabus
T1	Class # 01 – 25
T2	Class # 26 – 47
T3	Class # 48 – 57

Book Type	Code	Author & Title	Publication Info	
			Edition & Publisher	ISBN #
Text Book	TB	Ian Sommerville: Software Engineering	9th Edition, Pearson Education, 2012.	9788131762165, 8131762165
Text Book	TB	The SCRUM Primer, Ver 2.0, http://www.goodagile.com/scrumprimer/scrumprimer20.pdf	Online	-
Reference Book	RB	Roger.S.Pressman: Software Engineering-A Practitioners approach	7 th Edition, McGraw Hill, 2007.	9780071267823, 0071267824
Reference Book	RB	Pankaj Jalote: An Integrated Approach to Software Engineering	Wiley India	9780387208817, 038720881X

Signature of faculty

Signature of HOD

Signature of Principal