

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**Course Instructor** : **Jayasree C.V**  
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**Permanent Address** : **Kuzhayanvelly(H)** **Staff room** **Staff Room 5**  
 ..... **location:** .....  
**Okkal P.O**  
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**kALADY**  
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**Ernakulam**  
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**Course name** : **R 402 Computer Organization**  
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**Objective of the course** : **Provides a basic understanding of how computers do what they do**

**LECTURE SCHEDULE**

			Schedule	
			From	To
1	Organization and Architecture – Review of basic operational concepts	2	29/12/08	30/12/08
	CPU- single bus and two bus organization,	2	12/01/09	13/1/09
	Execution of a complete instruction	3	14/1/09	16/1/09
	interconnection structures – layered view of a computer system.	2	19/2/09	20/1/09
2	CPU - Arithmetic: Signed addition and subtraction	2	20/1/09	21/1/09
	serial and parallel adder – BCD adder – Carry look ahead adder,	3	22/1/09	27/1/09
	Multiplication – Array multiplier – Booth’s Algorithm,	3	28/1/09	31/1/09
	Division – Restoring and non-restoring division, floating point arithmetic - ALU Design.	4	01/02/09	07/02/09
3	Processor Logic Design – Processor Organization	3	09/02/09	11/02/09
	Control Logic Design – Control Organization –	2	12/02/09	13/2/09
	Hardwared control – Microprogram control	2	16/2/09	17/2/09
	LA control – Microprogram sequencer, Horizontal and vertical micro instructions – Nano instructions.	5	18/2/09	24/2/09
4	Memory: Memory hierarchy – RAM and ROM	2	25/2/09	26/2/09
	Memory system considerations – Associative memory, Virtual memory	3	27/2/09	06/03/09
	Cache memory – Memory interleaving.	2	07/03/09	09/03/09
5	Input – Output: Printers, Plotters, Displays	2	10/03/09	11/03/09
	Keyboard, Mouse, OMR and OCR,	2	12/03/09	13/3/09
	Device interface – I/O processor –	2	16/3/09	17/3/09

Standard I/O interfaces – RS 232 C, IEEE 488.2 (GPIB).	3	18/3/09	20/3/09
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### CLASS NOTES PREPARATION PLAN

Unit No.	Topic	Text Book	Page No.
1	introduction: Organization and Architecture – Review of basic operational concepts – CPU- single bus and two bus organization, Execution of a complete instruction – interconnection structures – layered view of a computer system.	T1,T2	2-6 7,9,421-422,267
2	CPU - Arithmetic: Signed addition and subtraction – serial and parallel adder – BCD adder – Carry look ahead adder, Multiplication – Array multiplier – Booth’s Algorithm, Division – Restoring and non-restoring division, floating point arithmetic - ALU Design.	T1	367-400
3	Control Unit Organization: Processor Logic Design – Processor Organization – Control Logic Design – Control Organization – Hardwared control – Microprogram control – PLA control – Microprogram sequencer, Horizontal and vertical micro instructions – Nano instructions.	T1	425-429
4	Memory: Memory hierarchy – RAM and ROM – Memory system considerations – Associative memory, Virtual memory – Cache memory – Memory interleaving.	T1	291-311,314,337
5	nput – Output: Printers, Plotters, Displays, Keyboard, Mouse, OMR and OCR, Device interface – I/O processor – Standard I/O interfaces – RS 232 C, IEEE 488.2 (GPIB).	T1	553-560

Name of the text Books:

T1:Computer Organization: V. Hamacher-Mc Graw Hill

T2:Digital computer design: Rajaraman

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**K.BINDU**

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location:**

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**ERNAKULAM**

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**KERALA**

**Course name : R403-Object oriented Programming**

**Objective of the course**

:

- 1) This course explains in a simple and easy to understand way how object oriented programming is done using C++ .
- 2) Since the future language is object oriented language ,this course is for programmers who are familiar with C language to know more object oriented language through C++ .

### LECTURE SCHEDULE

			Schedule	
			From	To
1	Introduction to OOP ,Evolution of object oriented languages	1	29/12/08	29/12/08
1	Need of objects,Definition of object oriented language	1	30/12/08	30/12/08
1	Classes & objects	1	1/1/09	1/1/09
1	Creating classes & using classes & objects	2	2/1/09	5/1/09
1	Member functions & variables	1	6/1/09	6/1/09
1	Tutorial on class & objects	1	8/1/09	8/1/09
1	Member functions & variables	2	9/1/09	12/1/09
1	Constructors	1	13/1/09	13/1/09
1	Destructors	1	15/1/09	15/1/09
1	Tutorial on member functions & variables	1	16/1/09	16/1/09
2	Inheritance & access control	1	19/1/09	19/1/09
2	Member access control in classes	1	20/1/09	20/1/09
2	Tutorial on member access control	1	22/1/09	22/1/09
	Assignment (1)	1	23/1/09	23/1/09
2	Friend function & classes	1	27/1/09	27/1/09
2	Extending classes (public,private & protected)	2	29/1/09	30/1/09
	Internal Examination (1)	3 days	2/2/09	4/2/09
2	Classification of inheritance (Multiple,Multilevel, Hybrid ,Hierarchical)	2	5/2/09	6/2/09
3	Polymorphism-runtime & compile time	2	9/2/09	10/2/09
3	Overloading functions & operators	3	12/2/09	16/2/09

	Tutorial on overloading functions & operators	1	17/2/09	17/2/09
3	Selecting friend member function for operator overloading	2	19/2/09	20/2/09
	Assignment (2)	1	24/2/09	24/2/09
3	Virtual function ,Pure virtual function	2	26/2/09	27/2/09
	Internal Examination(2)	3 days	2/3/09	4/3/09
3	Abstract class	1	5/3/09	5/3/09
	Tutorial on runtime polymorphism	1	6/3/09	6/3/09
4	Virtual base class	1	10/3/09	10/3/09
4	Template classes	2	12/3/09	13/3/09
4	Virtual Destructors	1	16/3/09	16/3/09
	Tutorial on virtual base class	1	17/3/09	17/3/09
5	Dynamic objects	1	19/3/09	19/3/09
5	Dynamic object allocation	1	20/3/09	20/3/09
5	Java-object oriented features in java,Comparison with C++	2	23/3/09	24/3/09
	Tutorial on dynamic objects	1	26/3/09	26/3/09
	Model Examination	6 days	2/4/09	8/4/09

### CLASS NOTES PREPARATION PLAN

Unit No.	Topic	Text Book	Page No.
1	Module1:Introduction to OOP-Constructors & Destructors	T1	1-147
2	Inheritance & access control	T1	176-215
3	Polymorphism (compile time, runtime), operator overloading, function overloading	T1	222-241
4	Namespaces, Templates	T1	307-322
5	Dynamic objects	T1	103

Name of the text Books:

T1:Object Oriented Programming with C++ by E. Balagurusamy (second edition)

Tata McGraw Hill

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**Staff room location:** A Block

**Course name** : Integrated Circuits

**Objective of the course :**

### LECTURE SCHEDULE

			Schedule	
			From	To
1	Propagation delay, power dissipation, noise margin window profile, fan in, fan out	2	6-2-09	10-2-09
	Logic families-DTL,TTL,tristate logic,ECL,I <sup>2</sup> L&CMOS,comparison of circuits	5	11-2-09	20-2-09
2	Storage elements- flipflops,latches,registers,decoders,multiplexers,buffers	3	24-2-09	27-2-09
	Memory systems- types of ROM,RAM,BJT RAM cells,MOS RAMs,RAM organization, Flash memories	4	6-3-09	13-3-09
	PLA,PAL,PGA,FPGA,PLD,CPLD,CDROM magneto optic storage	4	17-3-09	24-3-09
3	D/A converters, binary weighted resistor type,laddertype A/D converter, counting type, successive approximation type, parallel comparator type ,dual slope type.	6	25-3-09	15-4-09
4	Opamps- Basic principles Ideal Opamps Inverting and Non inverting Opamps	4	9-1-09	15-1-09
	Opamp characteristics-parameters,definitions,input offset voltage, input bias current, CMRR,slew rate,	2	16-1-09	20-1-09
5	Opamp applications Summing, comparator, differentiator, integrator, square wave generator, triangular wave generator using opamps	5	21-1-09	30-1-09

### CLASS NOTES PREPARATION PLAN

Unit No.	Topic	Text Book	Page No.
1	Logic Families	T1	
2	Storage Elements	T2	
3	D/A and A/D converters		
4	Opamps Principles		
5	Opamp Applications		

Name of the text Books:

T1: Integrated Circuits, Botkar, Khanna Publishers

T2: Digital Integrated Electronics, Taub and Schilling, McGraw Hill

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**Course name** : KANGIRATHINKAL HOUSE, IDUKKI  
**Objective of the course** : MANNAMKANDAM P.O, ADIMALY IDUKKI.  
**Intercom No.** 273  
**Staff room location:** Staff room no. ....  
**DATA STRUCTURES R405**  
**IT DEALS WITH THE DETAILED STUDY OF DATA ORGANIZATION, DATA RETRIEVAL AND DATA MANIPULATION**

### LECTURE SCHEDULE (R4 B)

			Schedule	
			From	To
2	Introduction	1	29/12/2008	29/12/2008
	Study of Basic Data Structures	1	8/01/09	8/01/09
	Arrays, Structures	1	8/01/09	8/01/09
	Stacks	1	9/01/09	9/01/09
	Queues	1	12/01/09	12/01/09
	Circular Queues	1	14/01/09	14/01/09
	Deque	1	15/01/09	15/01/09
	Priority Queue	1	15/01/09	15/01/09
	Evaluation of Expression	2	16/01/09	19/01/09
	Polynomial Representation Using Array	2	21/01/09	22/01/09
	Sparse Matrix	1	22/01/09	22/01/09
3	Linked List	2	23/01/09	28/01/09
	Linked stack	1	29/01/09	29/01/09
	Linked Queue	1	29/01/09	29/01/09
	Doubly linked list	2	30/02/09	5/02/09
	Polynomial representation using linked list	2	5/02/09	6/02/09

	Strings	1	9/02/09	9/02/09
	Data representation	1	11/02/09	11/02/09
	Pattern matching	1	12/02/09	12/02/09
4	Trees	2	12/02/09	13/02/09
	Binary trees	2	16/02/09	18/02/09
	Tree traversal	2	19/02/09	19/02/09
	Graphs	2	20/02/09	25/02/09
	DFS & BFS	3	26/02/09	27/03/09
5	Selection Sort	1	5/03/09	5/03/09
	Bubble sort	1	5/03/09	5/03/09
	Insertion sort	1	6/03/09	6/03/09
	Merge sort	1	11/03/09	11/03/09
	Quick sort	1	12/03/09	12/03/09
	Heap sort	1	12/03/09	12/03/09
	Radix sort	1	16/03/09	16/03/09
	External sorting methods	1	18/03/09	18/03/09
1	Principles of programming	1	19/03/09	19/03/09
	System Life Cycle	1	19/03/09	19/03/09
	Algorithm Specification	1	20/03/09	20/03/09
	Recursive Algorithm	1	23/03/09	23/03/09
	Documentation	1	25/03/09	25/03/09
	Performance analysis and Measurements	1	26/03/09	26/03/09
	Time and space complexity	1	26/03/09	26/03/09
	Complexity calculation of Simple Algorithm	1	27/03/09	27/03/09

### CLASS NOTES PREPARATION PLAN

Unit No.	Topic	Text Book	Page No.
2	Study of Basic Data Structures	T1	4-7
	Arrays	T1	10-18
	Stacks	T1	98-103
	Queues	T1	146-151
	Circular Queues	T1	153-156
	Deque	T1	156-159
	Priority Queue	T1	159-162
	Evaluation of Expression	T1	104-107
3	Linked List	T1	34-48
	Linked stack	T3	186

	Linked Queue	T3	186
	Doubly linked list	T1	51-56
	Polynomial representation using linked list	T1	63-67
	Strings	T2	104
	Data representation	T2	105-106
	Pattern matching	T2	106-109
4	Trees	T1	203-207
	Binary trees	T1	207-227
	Tree traversal	T1	227-231
	Graphs	T1	356-364
	DFS & BFS	T1	377-383
5	Selection Sort	T3	540
	Bubble sort	T3	541
	Insertion sort	T2	402
	Merge sort	T3	549
	Quick sort	T1	118-124
	Heap sort	T3	550-555
	Radix sort	T3	562
	External sorting methods	T3	678
1	Principles of programming		
	System Life Cycle	T2	2-3
	Algorithm Specification	T2	20
	Recursive Algorithm	T2	25
	Documentation		
	Performance analysis and Measurements	T2	30-60
	Time and space complexity	T2	30-43
	Complexity calculation of Simple Algorithm	T2	30-43

Name of the text Books:

T1:D.Samanta

T2: Ellis Horowitz

T3:Jean paul Tremblay