



Lesson Plan

Name : Mr. Jitendra Mistry

Department: Computer Science



VCA – 301 Programming in C++

Month	No. Of Lectures	Areas covered	Other Activities
July	16	<ul style="list-style-type: none">• Introduction to various programming languages and programming styles<ul style="list-style-type: none">○ Monolithic programming○ Functional programming○ OOPs programming○ Visual Programming• Algorithms• Flowcharts• Pseudocode• Operators• Keywords• Operators• Input output stream• variables	Assignments based on If condition Loops Nesting of loops Functions structures
August	18	<ul style="list-style-type: none">• Decision control• If else block• Nesting of if else block• Loops• Types of loops• Nesting of loops	Practical class tests. Assignments on if else block, loops, nesting of loops

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		<ul style="list-style-type: none">arrays	
September	18	<ul style="list-style-type: none">FunctionsCall by valueCall by referencePointersStorage classesPointers	Conducted test Assignments based on functions, call by value and call by reference
October	18	<ul style="list-style-type: none">Character arrayString handlingString handling functionsStructureUnion	Assignment On predefined string functions like strlen, strcmp, structure and Union.
November	04		Revision

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VCA – 302 Data Communication and Networking

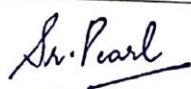
Month	No. Of Lectures	Areas covered	Other Activities
July	16	<ul style="list-style-type: none"> • Introduction to digital communication • Introduction to networks and types of networks like LAN, WAN , MAN, VPN, CAN • Introduction to Topology and discussion on types of Topology Ring, Mesh, Star, Bus, Tree, Hybrid etc • Signals and their types • Analog signals • Digital signals 	MCQ CLASS TEST
August	18	<ul style="list-style-type: none"> • Terminology of signalling • Amplitude • Frequency • Phase • Bit rate • Baud rate • Band width • Modulation • Amplitude Modulation • Frequency Modulation • Phase Modulation • Introduction to Transmission Media 	QUIZ
September	18	<ul style="list-style-type: none"> • Discussion on Guided media • TPC Cables • Co axial Cables 	GROUP DISCUSSION MCQ TEST

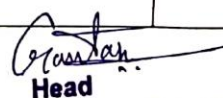
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		<ul style="list-style-type: none"> Fiber Optic Cables Unguided Medi Radio Waves Micro Waves Transmission and its types: Parallel Transmission and Serial Transmission Multiplexing TDMA FDMA WDMA Attenuation Delay Noise Distortion 	
October	18	<ul style="list-style-type: none"> Protocol Architecture OSI MODEL TCP/IP MODEL SMTP FTP TELNET NETWORKING DEVICES ROUTER HUB SWITCH 	QUIZ TEST MCQ TEST
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VCA – 401 Programming in C++

Month	No. Of Lectures	Areas covered	Other Activities
December	16	<ul style="list-style-type: none">• Evolution of OOPS concept and languages• Comparison between functional and OOPS languages• Intro to different terminology of oops like inheritance, polymorphism, data abstraction etc• Classes• Objects	MCQ CLASS TEST
January	18	<ul style="list-style-type: none">• Class data member• Member functions• Objects• Array of objects• Pointers and classes• Constructor• Destructor• Polymorphism• Function over loading	QUIZ
February	18	<ul style="list-style-type: none">• Function over riding• Static class member• Friend functions• Dynamic memory allocation	GROUP DISCUSSION MCQ TEST
March	18	<ul style="list-style-type: none">• Inheritance• Types of inheritance• Member access control• Function over loading	QUIZ TEST MCQ TEST

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		<ul style="list-style-type: none">• Operator over loading• Virtual Functions	
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VCA – 402 Data Structure and Algorithm

Month	No. Of Lectures	Areas covered	Other Activities
December	16	<ul style="list-style-type: none">• Introduction and definition of algorithm• Characteristics of good algorithm• Data types: Primitive and Composite• Arrays : Two and three dimensional• Memory representation of arrays	MCQ CLASS TEST
January	18	<ul style="list-style-type: none">• Sorting concepts and algorithms• External and Internal sorting• Selection and Merge sort• Searching concepts and algorithms• Binary Search and Linear Search• Linked Lists – Introduction• Types of linked list• Algorithms to search , sort and traverse linked lists	QUIZ
February	18	<ul style="list-style-type: none">• Introduction to stacks• Representation of stacks• Implementation of stacks• Introduction to queue• Representation of queue• Implementation of queue	GROUP DISCUSSION MCQ TEST
March	18	<ul style="list-style-type: none">• Introduction to trees• Traversing a tree• Pre Order, Post Order and In Order• Introduction to graph	QUIZ TEST MCQ TEST

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		<ul style="list-style-type: none">• Types of graphs• Breadth first search• Depth first search	
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