

Suggested link of Video lectures for Diploma (Information Technology) Students

Subject Name :Networking with TCP/IP		
Subject Code IT 501		
Sr. No.	Course Content	Video URL Link
	Unit 1: Introduction	
1	Transmission Control Protocol Suit. Addressing – Logical Address, Physical Address, Port Address, IP Versions, Connecting Devices:	https://www.youtube.com/watch?v=LqxYdCSXDvk
2	- Repeater, Hub, Bridge, Router. Classful Addressing: Recognizing Classes, Netid And Host Id, Classes and Blocks, Network Addresses, Masking ,CIDR Notion, Multi Homed Devices, Special Addresses, Private Addresses, Unicast, Multi Cast, Broadcast Addresses, Subnetting, Super Netting, Subnet Mask, Supernet Mask. Delivering ,Forwarding and Routing Of IP Packets. Delivery :- Connection Type, Direct Versus Indirect Delivery Forwarding:- Forwarding Techniques ,Forwarding With Classful Addressing And Classless Addressing. Routing:- Static Versus Dynamic Routing , Routing Table. Structure Of Router,ARP,RARP	https://www.youtube.com/watch?v=JFF2vJaN0Cw&list=PLxCzCOWd7aiGFBD2-2joCpWOLUrDLvVV
	Unit 2: Internet Protocol	

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	<p>Internet Protocol Datagram, Fragmentation:- Maximum Transfer Unit (MTU), Field related to fragmentation,Checksum calculation at the sender, Checksum calculation at the receiver. ICMP (Internet Control Message Protocol), Types of messages, Message Format, Error Reporting – Destination Unreachable, Source Quench, Query:- Echo request and replay, Time Stamp Request and Replay, Debugging Tools :- Ping, Trace-route. IGMP (INTERNET GROUP MANAGEMENT PROTOCOL) Message</p>	<p>https://www.youtube.com/watch?v=JFF2vJaN0Cw&list=PLxCzCOWd7aiGFBD2-2joCpWOLUrDLvVV</p>
	<p>Format, Joining a Group, Leaving a Group, Monitoring Membership.</p>	
<p>3</p>	<p>Unit –III User Datagram Protocol (UDP) User Datagram Protocol (UDP) - Process To Process Communication, Port Number, Socket Address, User Datagram, Checksum Calculation at Sender and Receiver, UDP Operation.</p>	<p>https://www.youtube.com/watch?v=HF_znV8x9a0</p>
<p>4</p>	<p>Unit 4: Transmission Control Protocol (TCP) TCP Services, Process To Process Communication, Stream Delivery Service, Full Duplex Communication, Connection Oriented Service, Reliable Service, TCP Features- Numbering System, Flow Control, Error Control, Congestion Control , Segment- Format, Encapsulation, Connection Establishment, Data Transfer, Connection Termination. Flow Control- Sliding Window Protocol, Silly Window Syndrome Error Control-Checksum, Acknowledgement, Retransmission, Congestion Control.</p>	<p>https://www.youtube.com/watch?v=c8aet11HNxg</p>
	<p>Unit 5: Routing</p>	

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5	<p>Routing Protocol, Intra And Inter domain Routing, Distance Vector Routing- Initialization, Sharing, Updation, RIP- , Message Format, Request And Response , Link State Routing, OSPF-Areas, Metrics, Types Of Link, Graphical Representation, OSPF Packet. Host Configuration- Bootp And DHCP BOOTP- Operation, Packet Format, DHCP- Static Address Allocation, Dynamic Address Allocation, Manual And Automatic Configuration, Packet Format, Transition States, Exchanging Messages.</p>	<p>https://www.youtube.com/watch?v=JFF2vJaN0Cw&list=PLxCzCOWd7aiGFBD2-2joCpWOLUrDLvVV</p>
6	<p>Unit -6 Host Configuration Host Configuration- Bootp And DHCP BOOTP- Operation, Packet Format, DHCP- Static Address Allocation, Dynamic Address Allocation, Manual And Automatic Configuration, Packet Format, Transition States, Exchanging Messages.</p>	<p>https://www.youtube.com/watch?v=FhezqYWp2r4</p>
7	<p>Unit 7:Domain Name System (DNS) Flat Name Space, Hierarchical Name Space, Domain Name Space, Distribution Of Name Space, DNS In Internet, Resolution:-Resolver, Mapping name to address, Mapping address to name . Telnet, FTP, TFTP, Email Protocol:- SMTP, POP, IMAP. Private Networks, Virtual Private Network, Network Address Translation, Ipv6:- Address Space Assignment, Packet Format, Comparison between IPv4 and IPv6,ICMPv6:- Error Reporting. Transition from IPv4 to IPv6:- Dual Stack,</p>	<p>https://www.youtube.com/watch?v=TTohPx CpYTQ&list=PLA085D9B72035626B</p>
	<p>Tunneling, Header translation.</p>	<p>https://www.youtube.com/watch?v=DMnCbKbcJ-qw</p>

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Subject Name :Java programming Subject Code IT 502		
Sr. No.	Course Content	Video URL Link
1	<p>OVERVIEW OF JAVA LANGUAGE</p> <p>JAVA and its support systems, JAVA environment.</p> <p>JAVA program structure, Tokens, Statements, JAVA virtual machine, C++ Versus JAVA, Constants & Variables, Data Types, Declaration of Variables, Scope of Variables, Symbolic Constants, Type Casting , Operators: Arithmetic, Relational, Logical Assignments, Increment & Decrement, Conditional, Bit wise, Special, Expressions & its Evaluation. Control statements: If statements and its variant, Switch statement,? Operator, While loop, Do while loop, For loop, Break and continue, Labeled Loops.</p>	<p>https://youtu.be/eKR M-053ei4</p> <p>https://www.youtube.com/watch?v=dC45ig0MvY</p>
2	CLASSES, OBJECTS & METHODS	

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	Defining a Class, Adding Variables & Methods, Creating Objects, Accessing Class Members , Constructors, Methods Overloading, Static Members, Nesting of Methods, Inheritance: Extending a Class, Overriding Methods, Concept of public, private and protected, Final Variables & Methods, Final Classes, Finalizer Methods, Abstract methods & Classes, Static class, Visibility Control.	
3	ARRAYS, STRINGS & VECTORS Arrays : One Dimensional & two Dimensional, strings, Vectors, wrapper Classes, Defining Interfaces, Extending Interfaces, Implementing Interfaces, Accessing Interfaces Variables, Systems Packages, Using System Packages, Naming Conventions, Creating Packages, Accessing a Package, Using Package, Adding a Class to a Package, Hiding Classes.	https://www.youtube.com/watch?v=x6cUOyzzjKU
4	MULTITHREADED PROGRAMMING Creating Threads, Extending the Threads Class, Stopping & Blocking a Thread, Life Cycle of a Thread, Using Thread Methods, basic exception handling ,Threads Exceptions, Thread Priority, Synchronization, Implementing the Runnable Interface.	https://youtu.be/eKR M-053ei4
5	APPLET PROGRAMMING	

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	<p>Local & Remote Applets, Applets Vs Applications, Writing Applets, Applets Life Cycle, Creating an Executable Applet, Designing a Web Page, Applet Tag, Adding Applet to HTML File, Running the Applet, Passing Parameters to Applets, Aligning the Display, HTML Tags & Applets, Getting Input from the User.</p>	<p>https://www.youtube.com/watch?v=bLV0xxlUpi4</p>
6	<p>JDBC</p> <p>Understanding JDBC, JDBC Architecture, types of JDBC driver, Register JDBC driver, establish a database connection, execute an SQL statement, process the result, close the data base connection.</p>	<p>https://www.youtube.com/watch?v=KEXJ7ZXSZww&list=PLnfa pp4Woqpp9m-lrwkkg tWPgf9yMMP wd</p>
7	<p>File handling and simple GUI Design</p> <p>Introduction, Data records, reading and writing to text files, simple GUI design joption pane class, message dialog-presenting information to user, input dialog-reading data from the user, confirmation dialog - getting confirmation from user.</p>	<p>https://www.youtube.com/watch?v=18ikKFkVlv4</p>

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Subject Name :Software Engineering Subject Code IT 504		
Sr. No.	Course Content	Video URL Link
1	INTRODUCTION TO SOFTWARE ENGINEERING	https://youtu.be/tZreaH_FyMs?list=PLV8vIYTIdSnat3WCO9jfehZyinx74wm
	Software characteristics, Software myths. Components, application; process.	
	methods, tools & view of S/E; software process Capability Maturity Model. life cycle models (water fall, incremental, spiral, RAD, prototyping, object oriented)	
	fourth generation model.	
2	SOFTWARE PROJECT PLANNING	https://www.youtube.com/watch?v=M-ROc1JKIRU&list=PLI0WdhayQoFC3JUXMzakqmst7I9W0LjwN
	Responsibilities of Software Project manager, Project planning Objective.	
	Software scope, Software project estimation technique, Decomposition techniques, Estimation models, Scheduling, staffing, Risk Management.	
	Software configuration Management	
3	SOFTWARE REQUIREMENT ANALYSIS, SPECIFICATION & MODELING	https://www.youtube.com/watch?v=ABDIyiW3b7g
	Analysis principles, system specification, software requirement specifications.	
	functional specifications, software prototyping, specification, data modeling, data	
	flow diagrams, ER Diagram, Mechanics of structured analysis, data dictionary.	
	OBJECT –ORIENTED CONCEPT	https://www.youtube.com/watch?v=BqVqjJq7_vl&list=PLrjkTql

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4	Object Oriented Concepts, Unified Modeling language Diagram(Use Case	https://www.youtube.com/watch?v=6oz8MKShCVE
	Diagram, Class Diagram, Sequence Diagram, State Chart Diagram)Elements Of	https://www.youtube.com/watch?v=OSr0T7ErhRE
	Object Modeling, Management Of Object Oriented Software Projects. Object	
	Oriented Analysis, Domain Analysis, OOA Process	https://www.youtube.com/watch?v=Fm0pQzQDwOI
	Conventional v/s OO Approach, Object –Relationship Model	
5	DESIGN CONCEPT PRINCIPLE AND METHODS	
	Design Process, Design Principles, Design Concepts, Effective Modular Design.	https://www.youtube.com/watch?v=Fv6i4ja2O6w
	Design Documentation, Architectural Design, and Architectural Design Process	
	- Optimization, Procedural Design.	
6	SOFTWARE TESTING	
	<i>Software Testing Fundamentals:</i> Principles & objectives, V model.	
	<i>Testing Methodology:</i> Unit Test, Integration Test, Functional testing, System Testing, Acceptance test, White Box & Black Box testing techniques Gray box testing, Retesting and Regression testing, Debugging & reliability Analysis	https://www.youtube.com/watch?v=7eHES5V8YPA
	<i>Testing Documentation:</i> Test Requirement, Test Plan, Test case design and execution(Study of manual testing tool : Quality center)	
	<i>Software Reliability And Quality Management:</i> Concepts of S/W Quality Control and Assurance, Software Reliability, ISO 9000 & 9001, Standard SEI –CMM	https://www.youtube.com/watch?v=6_L6HNeDRCU

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	SOFTWARE IMPLEMENTATION AND MAINTAINANCE	
7	Characteristics, reverse engineering, maintenance process model, estimation of maintenance cost	https://www.youtube.com/watch?v=YYy1so-VByE

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Subject Name :Wireless & Mobile Computing		
Subject Code IT 511		
Sr. No.	Course Content	Video URL Link
1	Introduction to wireless technology	https://www.youtube.com/watch?v=SsDehR3kCGs
	Comparison of wired and wireless mechanism,	
	Basic equipments in wireless communication: Wireless access point, Wireless access cards, routers etc.	
	Various types of wireless communication technologies used in Mobiles, Antennas etc.	
	Concept of spread spectrum, various types of spread spectrum	
	Spreading sequences.	
2	Wireless LAN	https://www.youtube.com/watch?v=QYWVKKSieU4
	Wireless local loops	
	Wireless access protocols	
	Various types of wireless LAN technologies like infrared, microwave LANs etc.	
	IEEE 802.11x standards for wireless LANs	
3	Cellular system infrastructure	https://www.youtube.com/watch?v=oKg47n3zIe4&list=PL4P_XuK_iPG2GI70g7QDkIAMWEIWUpxnp
	3.1 Cell fundamentals: Cell site, cell capacity, frequency reuse clustering, co channel interference ,Cell splitting ,cell sectoring	
	3.2.Mobile station(MS),Base transceiver station (BTS),Mobile switching center(MSC),Functions of MSC,Base station system, Base station control,HLR,VLR	
	3.3 Mobile station(MS) registration	
	GSM Technology	
	GSM network architecture	
	GSM channel concepts: logical channels, Broadcast channel, Common control channel & dedicated control channel.	

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4	GSM identities: Mobile station associated numbers, Network Numbering plans, mobile station roaming number.	https://www.youtube.com/watch?v=PIJFUNcrZ7c
	GSM system operation: GSM call setup phase, GSM call confirmation and call accepted ,GSM location updating, GSM Connection release.	
	Overview of CDMA technology	
5	Reflection & Propagation models	https://www.youtube.com/watch?v=XU0yW8MyJkg
	Mobile radio propagation	
	Ground reflection model	
	Diffraction sculpturing	
	Indoor propagation models	
	Outdoor propagation models	
Ray tracing		
6	Evolution and Deployment of cellular system	https://www.youtube.com/watch?v=XYs_osmAGI4
	Short Message Services (SMS), Enhanced Message services(EMS), Multimedia Message Services (MMS) & Mobile Instant Messaging(MIM)	
	1G cellular Systems	
	2G cellular Systems	
	2.5G cellular Systems	
	3G cellular Systems	
	4G cellular Systems	
	Emerging wireless technologies	

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Subject Name :Wireless & Mobile Computing		
Subject Code IT 511		
Sr. No.	Course Content	Video URL Link
1	Introduction to .NET	https://www.youtube.com/watch?v=8P2EHvAIOs&list=PLCgNdIHNFTHYr1m-GzrbxC4FhTuucRDV
	Introduction to Microsoft.Net Framework, Building blocks in .Net, Drawback of previous languages, Understand .Net, Common language runtime (CLR), Common type system (CTS), Difference between ASP and ASP. Net, Introduction to IIS, web application and it's usage, ASP.Net IDE Visual studio .Net, Creation of web forms, Using web form controls	
2	ASP.Net Objects and components	https://www.youtube.com/watch?v=TFBQaJ27Rwl&list=PLpwfQS03DDEJNMnapD5VWkFf_2ziq0D9X
	Response object, Server object, Application object, Session object, ASP.Net scope, state, view state, post back and configuration, Object Creation: Scripting, Drive, Folder, File, Use of object, Server Components: Ad Rotator, Content Linker, Browser Capabilities	
3	Use and Creation of global.asa file, Application object: Events, Methods and collections, Example, Session object: Enabling and disabling of session, Event, Properties, Method, Collection.	https://www.youtube.com/watch?v=aoFDyt8oG0k&list=PL6n9fhu94yhX5dzHunAI2t4kE0kOuv4D7
	ADO.Net	
4	ADO.Net in ASP. Net: Connection, Dataset and data reader, Data table and data row, Web.config introduction, Binding data with data grid, Accessing and manipulating data, ADO .Net: Server control templates and data binding techniques, Data access in .Net using ADO.Net, Server control templates available for data binding like repeater, data list and data grid controls.	https://www.youtube.com/watch?v=1reXeq3PsjQ
	ASP Transactions and e-mail	
	Transactions, Transaction db design, CDONTS object, Email sending web page creation	
	Working with XML in ASP.NET	

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5	Basics of XML, XML support in .NET, XML Validation Overview, XML Parsing API's in .NET, Parsing XML with the XmlTextReader, Parsing XML using DOM Objects, Generating XML with the XmlTextWriter, Introduction to XSLT, Transforming XML using .NET's XSLT classes, Viewing relational data as XML, Dataset XML Properties and Methods, Using the XmlDataDocument Class Syncing between DataSets and XmlDataDocuments.	https://www.youtube.com/watch?v=k9owEd7es10&list=PLV8vIYTIdSnai886vBer6WgpqhQkPZrLB
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Subject Name :Advance WebTechnology		
Subject Code IT 613		
Sr. No.	Course Content	Video URL Link
1	INTRODUCTION	
	History, Current and Future Versions of MySQL and PHP, How to Get MySQL, Installing MySQL on Windows, Trouble Shooting your Installation, Basic Security Guidelines, Building PHP on Windows with Apache, <u>Windows_php.ini_Basics</u>	https://www.youtube.com/watch?v=nQwtCLsYJnU&list=PLTgRMOcmRb3PW33bf3jQytBjd04tdAOXR
	The Basics of PHP scripts. The Building blocks of PHP: Variables, Data Types, <u>Operators and Expressions, Constants</u>	https://www.youtube.com/watch?v=EdK9K77dwzE
	. Flow Control Functions in PHP: Switching Flow, Loops, Code Blocks and Browser Output.	https://www.youtube.com/watch?v=PICItxHUMx0
2	BASIC WORKING	
	Working with Functions: What is function?, Calling functions, Defining Functions, Returning the values from User-Defined Functions, Variable Scope, Saving state between Function calls with the static statement, more about arguments. Working with Arrays: What are Arrays, Creating Arrays, <u>Some Array-Related Functions</u>	https://www.youtube.com/watch?v=M8i-1oeHaDw&list=PL-JvKqQx2Atf5w_httliQrmqPpL7oLc-W
	Working with Objects: Creating Objects, Object Instance Working with Strings, Dates and Time: Formatting strings with PHP, Investigating Strings with PHP, Manipulating Strings with PHP, Using Date and Time <u>Functions in PHP</u>	https://www.youtube.com/watch?v=mekEGxcFyNo&list=PLbGui_ZYuhiaWMoOK7LXB0GeLsYCIyz5
	Working with Forms: Creating Forms, Accessing Form Input with User defined Arrays, Combining HTML and PHP code on a single Page, Using Hidden Fields to save state, Redirecting the user, Sending Mail on Form Submission, Working with File Uploads.	https://www.youtube.com/watch?v=FRGa2H242fi
	MYSQL BASICS	
3	Understanding the database design process: The Importance of Good Database Design, Types of Table Relationships, Understanding Normalization.	

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	<p>Learning basic SQL Commands: Learning the MySQL Data types, Learning the Table Creation Syntax, Using Insert Command, Using SELECT Command, Using WHERE in your Queries, Selecting from Multiple Tables, Using the UPDATE command to modify records, Using the DELETE Command, Frequently used string functions in MySQL, Using Date and Time Functions in MySQL.</p>	<p>https://www.youtube.com/watch?v=dG4ntXJI05Y&list=PLV8vIYTIdSnaLv1qGjOnYOb989ThPdU0</p>
4	<p>PHP WITH MYSQL</p> <p>Interacting with MySQL using PHP: MySQL Versus MySQLi Functions, Connecting to MySQL with PHP, Working with MySQL Data.</p> <p>Creating an Online Address Book: Planning and Creating Database Tables, Creating Menu, Creating Record Addition Mechanism, Viewing Records, Creating the Record Deletion Mechanism, Adding Sub-entities to a Record</p>	<p>https://www.youtube.com/watch?v=-FFGJGPzZJw&list=PLcuqiGkigdex_2ytK5X-HptOJSJ7Mm9bU</p>