

**North Maharashtra University, Jalgaon**  
**New Course Structure For Advance Diploma In Software**  
**Technology & Management (ADSTM)**  
**w.e.f. from June 2004**

- 1.1 VB Script, Java Script, ASP
  - 1.2 Internet Fundamentals and Essentials of E-Commerce
  - 1.3 Visual Basic
  - 1.4 Software Design & Software Quality Management
  - 1.5 Oracle / D2K
  - 1.6 Business Applications
  - 1.7 Project Viva Voce
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**Details of Equivalence for New Course Structure For ADSTM**  
**Equivalence**  
**w.e.f. from June 2004**

**New Course**

**Old Course**

1.1	VB Script, JAVA Script, ASP	101.	Visual C++
1.2	Internet Fundamentals and Essentials of E-Commerce	103.	Introduction to Internet and Java Programming
1.3	Visual Basic	105.	Visual Basic
1.4	Software Design and Software Quality Mgt	102.	Software Engineering
1.5	Oracle/D2K	104.	Introduction to Oracle
1.6	Business Application	106.	Business Application
1.7	Practical	107.	Practical
1.8	Project Viva Voce	108.	Project Viva Voce

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**Advance Diploma In Software Technology & Management**  
**(ADSTM)**

**1.1 JavaScript, VBScript & ASP**  
**(W.e.f - June, 2004)**

**Active server Pages**

Introduction , Comparison With CGI , ISAPI, IDC Creating html and asp Components Creating Web Projects and Databases Projects

**Using Cookies**

Creating Cookies, Persisting Cookies, Saving

**Databases Access with ASP**

Active X Data Object Model, ODBC Driver and OLE DB Provider  
Creating Active Data Object Components, Connecting and Accessing Various Data Sources, Oracle, MS Access

**Windows Distributed Internet**

Architecture, Over view , Client - Server Architecture, Developing ASP

**VB Script**

intro to Scripting Language, Introduction to VBscript, VBscript Language  
VBscript Object Model, Frames, Working with Browser Windows, Statement and Function

**Java Script**

Introduction to Javascript, Difference Between Java and JavaScript, Browser Compatible Script tag, Usage of Script Tag, JavaScript Using Scripting Tag and Script File Version Types of Script Tag, Immediate, Deferred and Hybrid, Browser Object, Syntax, Data Type, Loops, Objects - Window, Documents image, Links Anchors, Frame, Applets and FORMS, Event Handling, Evaluating Forms

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**1.2 Internet Fundamental and Essentials of E-commerce**  
**(W.E.F - June,2004)**

Concepts of Networking LAN, MAN, and WAN  
Basic requirement for Internet Modems, Browsers, gateways, bandwidth, leased lines, ISP, voice mail Domain address types  
TCP/IP setting for Internet  
Internet Security: Firewalls  
Mail services  
HTML  
Web Designing Fundamentals  
Introduction to HTML, Internet Protocols, Communication on the Internet, URLs in HTML  
Document structure Elements in HTML  
Block Formatting Elements (Font, Color, Size)  
MARQUEE Elements  
List Elements  
Form Elements  
Input Elements, select Elements, Option Elements, Character formatting, Information type Elements  
Introduction to Table Elements  
BORDER, CELLSPACING, ALIGN, BGCOLOR  
Table and Style Sheets  
Introduction to Frames and Dynamic Documents  
Introduction to Web Publishing  
Interface Design  
Establishing Links  
Page Design  
Uses of GIF and JPEG Files  
Creating a simple Home Page and Site

**UNIT 1 : WHAT IS ELECTRONIC COMMERCE?**

1. Fundamentals of Electronics Commerce
2. Traditional Commerce: An Overview
3. Issues Associated With E-Commerce
4. Comparison Between Traditional And E-Commerce
5. Broad View Of E-Commerce

## UNIT 2: SECURITY OF E-COMMERCE

1. Introduction & Objectives
2. Security Threats And Solution
3. Techniques And solutions For E-Commerce Security
4. Message Security
5. Methods Of Encryption
6. Fast Cryptography
7. Certificate Authority
8. Enterprise Authentication Using Digital Certificate
9. Few Security Standards For The Internet
10. Shielding The Network using "Firewall"
11. Role Of Virtual Private Network(VPN)
12. Network Security

## UNIT 3: ELECTRONIC PAYMENT SCHEME

1. Introduction & Objective
2. A Look At The Traditional Payment Methods
3. Layered Protocol Model For Electronic Payment
4. A view Of Internet Payment Process
5. An Understanding Of Credit Card Payment Schemes On the Internet
6. SET And JEPi
7. Digital Cash

## UNIT :4 ELECTRONIC DATA INTERCHANGE

1. Introduction & Objective
2. History Of EDI
3. Implementation Difficulties Of EDI
4. EDI Working Concepts
5. Financial EDI
6. EDI & Internet

### Reference:

Ecommerce	C S V Murthy
Ebusiness	Ravi kalkota

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**1.3 Visual Basic 6.0**  
**(W.E.F -June, 2004)**

**Unit 1: Introduction To Visual Basic:-**

Introduction, objectives, VB application Development cycle,  
Types of installation (Enterprises, Learning, Professional)  
Visual Basic Controls.

**Unit 2: Programming Fundamentals**

Introduction, objectives, variable, data type, modules,  
Procedures, functions, control structures, exit statement, control  
array,

**Unit 3: Menus MDI, Data Files**

Introduction, objectives, Menu Editor, writing code for menu  
controls, Dialog Boxes, MDI application Menus in MDI  
Application, status bar, tool bar, Data Files.

**Unit 4 Accessing Databases**

Introduction, objectives, Database, creating data using  
Visual Data Manager, accessing database, data control, DAO,  
ADO, RDO, Visual Basic and Oracle connectivity

**References:**

Visual Basic 6.0-Muvach

Visual basic From Ground Up -Gary Cornel

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**1.4 Software Design and Software Quality Management**  
**(W.E.F -June, 2004)**

**Introduction:**

The evolving role of software, software Myths, Software Crisis, Software Processes  
Software life cycle models: Waterfall, Prototype, Evolutionary and Spiral models.  
Overview of Quality Standards like ISO 9001

### Software requirement Analysis and specification:

Problem analysis, DFD, Data Dictionary, ERD, software requirement and specification, Behavioral and non-behavioral requirements, Software Prototyping.

### Concepts and Overview of S/w Quality Management:

Concepts of software quality, quality Attributes, Software quality control and software quality assurance, Evolution of SQA, major SQA activities, major SQA issues, Zero defect software.

### Software Quality Assurance:

The Philosophy of Assurance, the meaning of quality, the relationship of assurance to the software Life Cycle, SQA Techniques.

### Tailoring the software quality assurance program:

Reviews, Walkthrough, Inspection, and Configuration Audits.

### Software Design:

Cohesion and Coupling, Classification of Cohesiveness and Coupling, Function Oriented Design, Object Oriented Design, User Interface Design.

### Software Testing:

Software process, Functional testing, Equivalence class testing, Decision table testing, Cause effect graphing, Structural testing Integration and system testing, debugging, testing tools and standards.

### Reference:

1. R.S. Pressman, "Software Engineering- A practitioners approach", 3rd ed., McGraw Hill Int. Ed., 1992.
2. K.K. Aggarwal and Yogesh Sing, "Software engineering", New Age International, 2001.
3. Robert Dunn, "software quality concepts and plans", Prentice- Hall, 1990.
4. Alan Gillies, "software quality. Theory and Management", Chapman and Hall, 1992.
5. R.Fairley, "Software Engineering Concepts", Tata McGraw Hill, 1997.
6. P.Jalote, "An Integrated approach to software engineering", Narosa, 1991

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**1.5 ORACLE/D2K**  
**(W.E.F -June,2004)**

**SQL:**

Introduction, Data types in oracle - operators, Working with table. Introduction to DML, TCL, DDL, DCL. Nested table, Varray, object table Integrity constraints, Function in Oracle, Numeric Function, Character Function, Date function, Conversion Function, Group Function

**Working with Multiple Tables:**

Set Operators, Joins, Inner joins, Equi, Non Equi, Self-joins, and Outer Joins

**Sub Queries and Database Objects:**

Sub Queries Using Correlated Queries View, Index Partition, Sequence, Cluster Synonyms, Materialized View

**Locks:**

Locks in Oracle, Concept of Locking Shared Locks, Shared Update Locks, Dead Locks

**PL/SQL:**

Introduction, PL/SQL Blocks, Advantages of PL/SQL, Control Structure, Nested Blocks

**Cursor**

Implicit Cursors, Explicit Cursor, Composite Data Type, Table and records

**Triggers :**

Types of trigger, Enabling & Disabling, Database trigger

**Introduction of LOBS:**

CLOB, NCLOB, BFILE, BLOB

**Commonly Used Tools of Oracle:**

WEBDB, TKPROF, EXPORT, IMPORT

## Developer 6i

### Introduction:

Working with the Form Developer Environment, Working a Basic Form Module  
Working With Data Blocks And Frame Running the Form Developer Application

### Data Blocks:

Data Block wizard, Creating Block Manually, Base Table block and control block,  
Master Details Blocks,

### Working with GUI Controls:

Working with Text Items, Creating Additional, Input Items, Check Box, Radio  
Button, List Item, Creating Non Input Items Display item , Push Buttons, Label and  
Boiler Plate Graphics

### Record Group and LOV:

Working with Record Groups, Creating LOV's, LOV's Wizard, LOV Properties

### EDITORS AND ALERTS:

Types of Editors, Alerts, Properties

### Property Class and Visual Attributes.

CREATING POPUP, MENU, TOOLBAR, TRIGGER, Trigger Validation

### REPORT:

Design and Running Report. Parameter Report . Group Report. Matrix Report.  
Tabular Report.

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### Advance Diploma In Software Technology & Management

#### 1.6 Business Applications

(W.E.F -June,2004)

### Introduction to different Business segments:

- Manufacturing
- Trading
- Finance
- Services Industry

Flow of information in various segments. Discussion about input documents and Output reports in general for the above sectors.

### 1. PAYROLL SYSTEM

Earning & Deduction Calculation Module  
Wage Pay Slip Processing  
Monthly Salary File  
Report Generation  
Preparation Of Annual Summaries  
Bonus Reporting  
STATUTORY REPORTS  
Costing and Management Reports

### 2. LIBRARY MANAGEMENT SYSTEM

Books Issue, Return, Fine Due analysis  
Reports- Author wise, Book wise, Subject wise etc  
Video, Audio Cassette Library system, Reports

### 3. INVENTORY MANAGEMENT

Purchase order processing  
Stores Accounting  
Stores transaction receipts, Issues and adjustment  
Stock ledger  
Inventory levels EOQ, ABC Analysis  
Inventory control reports such as slow moving / non moving items  
MATERIAL PLANNING Bill of material Computing Gross / net requirements

### 4. HOTEL MANAGEMENT

Departmental Organization of Hotel: such as room occupancies, room service, restaurant, house keeping, conferencing, exhibition, parties etc  
Kitchen stores accounting  
Reservation check in and check out  
Service accounting and bill printing  
Management Reports.

### 5. HOSPITAL MANAGEMENT

Departmental organization of hospital such as in-patient, outpatient, laboratories, pharmacy, surgical rooms etc

Medical stores accounting  
Registration, shifting and discharge of patient  
Service accounting and bill printing  
Management Reports

**Note: All the above systems must consist of the following**

1. File Layout
2. E-R Diagram
3. Data Flow Diagram
4. Input Design
5. Output Design

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**Practical (1.6)**  
**(W.E.F -June,2004)**

**Visual Basic**

1. Create a VB Application which shows use of all intrinsic controls.
2. Develop a simple event demo of Visual Basic .
3. Develop a Scientific Calculator using control array.
4. Create a Mark sheet using standard module
5. Create a Paint Brush application.
6. Create Simple Report using Data report.
7. Create Grouping Report using Data report.
8. Create menu on MDI form & Call different forms.

**Oracle/ D2K**

1. Design of Database ,Create table ,Insert a Record, Update the data.
2. Write a SQL queries using string and date functions.
3. Write a PL/SQL block using cursor.
4. Write a PL/SQL block using Control statement and error handling sections.
5. Create Function.
6. Create Simple Data entry Form with Validation.
7. Create Master Detail data entry Form.
8. Design Simple Report.
9. Design Master detail Report
10. Design Matrix Report.

## Internet Fundamentals and Web designing Tools

1. Demonstration of Internet Operating.
2. Web Page Design using simple HTML tags.
3. Implement lists in web page.
4. Use of Graphical files in web pages.
5. Create Tabular Document in Web Page.
6. Linking Document with its types.
7. Use of Frames and its attributes.
8. DHTML Tags with attributes.
9. Use of Cascaded Style sheets with SPAN and DIV tag.
10. Sample Web site.

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