

DEPARTMENT OF EMPLOYMENT AND TRAINING

SYLLABUS FOR INDUSTRIAL SCHOOLS

**TRADE: ADVANCED INTEGRATED SOFTWARE
TECHNOLOGY**

**SYLLABUS FOR ADVANCED INTEGRATED
SOFTWARE TECHNOLOGY**

UNDER CODE OF REGULATION FOR INDUSTRIAL SCHOOLS

AS APPROVED BY

DEPARTMENT OF EMPLOYMENT AND TRAINING

CHEPAUK

CHENNAI – 600 005.

COURSE DETAILS

Name of Trade : **ADVANCED INTEGRATED
SOFTWARE TECHNOLOGY**

Qualification : **10TH PASS**

Age : **14-40 Years**

Duration : **1 Year**

Number of Trainees : **20**

Number of Practical hours : **32 hrs. per week**

Number of Theory Hours : **12 hrs. per week**

Space Required

Workshop : **300 sq. feet**

ClassRoom : **200 sq. feet**

Power Required in KW : **3 k.w.**

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**LIST OF COMMITTEE MEMBERS FOR THE TRADE OF
ADVANCED INTEGRATED SOFTWARE
TECHNOLOGY**

1. Thiru. T.Sundararajan,
Regional Joint Director, Chennai Region

2. Thiru.P. Dwaraka
Assistant Director of Training

3. Tmt. V. Shanthi
Assistant Training Officer,
Computer Operator and Programming Assistant
Govt. Industrial Training Institute, Ambattur

4. Tmt. D.Vasanthi
Assistant Training Officer,
Computer Operator and Programming Assistant
Govt. Industrial Training Unit, Thiruvanmiyur

5. Tmt. D.Thulasi
Assistant Training Officer,
Computer Operator and Programming Assistant
Govt. Industrial Training Institute, Ambattur.

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**SYLLABUS FOR THE TRADE OF
ADVANCED INTEGRATED SOFTWARE TECHNOLOGY**

SL.NO	WEEK NO	THEORY	PRACTICAL
1	1	Introduction to computers : Definition of computer. Simple fundamental concepts. Generation of computer. Classification / Types of computer. Characteristics of computers.	Ex.No.:1 Identify the various Parts of computer and their Connections.
2	2	Functional Block Diagram of Computer. Input, Processing, Output, Functions of ALU, control, storage, input and output devices. Application of computer: Viz. Railway, Electricity/Medical etc.,	Ex.No.:2 System Booting & DOS internal commands
3	3	Data Concepts. Bit, byte etc., Representation of data: Binary, Binary addition and subtraction using 1's, 2's complement, octal, hexadecimal, ASCII, EBCDIC, Positive versus, negative integers, floating point numbers.	Ex.No.3: Dos External Commands
4	4	Hardware Concepts: Input devices- On line & off line input devices. Different types of scanners. Digital Camera. Output devices-Impact, non Impact printers, Plotters .	Ex.No.4: Handling & Trouble shooting of the given Input & output devices
5	5	Memory devices: RAM, ROM, EPROM, EEPROM, ECCRAM, EDORAM, SDRAM and their specifications, memory storage locations, use of memory addressing in programming	Ex.No.5: Copying / Writing data from one media to other medias

SL.NO	WEEK NO	THEORY	PRACTICAL
6	6	Secondary memory devices: Floppy disk, hard disk (removable/fixed), concepts of Cylinders, tracks & sectors, advantages and limitation of secondary storage devices. Access time, Access methods (Sequential, direct, indexed) & CD-ROM, DVD.	Ex. No.: 6 Unix Commands
7	7	Introduction to various Operating System: Dos (Internal & External commands), Unix, Linux , etc.,	Ex.No.7 : a)Practice with Windows Basic Components and accessories. b)Program manager & File manager.
8	8	Windows Operating System : Start Windows. Using the Program Manager. Using Desktop Icons, File management through Windows. Using Essential Accessories	Ex.No.8 : Installation of New Hardware & Software.
9	9	Office Automation Packages: MS-WORD:- Documents:- Text Typing, deleting editing Opening/Creating, Saving/Quitting . Cursor Control. Printing Documents. Formatting: - Characters(Bold, Italics, etc.,) Paragraphs. Moving and Copying text. Bullets, Numbering. Background Colors, Page setup, Page size, Margin setting, Borders & shading. Header & Footer. News Paper column setting, Tab setting, Change case, Word count, page breaks, column break, print preview.	Ex.No.9 : a. Create a new document with suitable formatting tools. b. Insert Images with in that documents.

SL.NO	WEEK NO	THEORY	PRACTICAL
10	10	Inserting features:- Graphics, Formatting Graphics, text box.. Images , clipart images, chart. Word Art, System Time, date. Table , Formula. Find and replace the text. Spell checking & Grammer checking. Mail merge. Labels, Envelops, Letter wizard.	Ex.No.10 : Mail Merge Labels & Envelops creation.
11	11	MS-EXCEL:- Data Entry in cells, entry of numbers, text and formulae. Moving data around in a worksheet. Selecting data range. Using the Interface (Toolbars, Menus).Editing basics. Formatting and calculations. Calculations and worksheets- Using Autofill .Worksheet printing.	Ex. No. : 11 Creation of worksheets & Do calculation by applying related formulae.
12	12	Working with Graphs and Charts. Creating and formatting. Printing.Database Management in worksheet:Finding records with data form. Adding / deleting records. Filtering records in a worksheet.	Ex. No.: 12 Graphs & Charts creation for related data's.
13	13	MS-ACCESS: Introduction to Access. Features of Access. Create a new table, database & Design view. Fields data types, Length,etc., Table wizard. Import wizard. Adding records, Inserting new Records& columns. Deleting Records and table. Hide and unhide columns. Filtering- Sorting- records. Find and replace the data.	Ex. No.: 13 Creation of Tables with Different views.

SL.NO	WEEK NO	THEORY	PRACTICAL
14	14	Create queries, Run queries. Create forms- Form wizards- Design- Auto Form. Using Form Tools, setting properties, Writing code, Run the form. Create report-Save & Run the Report. Set relation between two tables. Page wizard-Auto page.	Ex. No. : 14 Practice on creation of queries & forms
15	15	MS-POWER POINT: Introduction to Power point and its basic menus. Explain the Menus:- File-Edit-Insert - and its optional setting. Insert the picture and designing the various styles. Slide layout; group, ungroup, shorten etc. View show, setup show-custom show , Action buttons, Animation.	Ex. No. : 15 Slide Show Presentation & Organization Chart.
16	16	Program Design and Logic. Problem analysis , algorithm, data flow diagrams, structures charts decision tables , pseudo coding & flowcharts .	Ex. No. : 16 Practice in Flowchart & Algorithm.
17	17	Visual Basic:- Introduction to Visual basic tools, Data types constant & forms details. Create a new project and save it. Changing the property of the form. Write simple programs in VB.	Ex. No. : 17 Use Application wizard to create an Application that includes an internet browser window and a splash screen.
18	18	Text box, labels, buttons and its properties. Changing the of properties of property window, Run the form, adding the text, label, image and other tools.	Ex. No. : 18 Modify the application and add color to that application
19	19	Condition statements. Loop statements and functions their application programs, Attaching code to the object and explain the event, properties, code window.	Ex. No. : 19 Creating text boxes include an exit button

SL.NO	WEEK NO	THEORY	PRACTICAL
20	20	Properties, control and objects details, timer picture frame, shape, scroll bars controls & their programs. Visual implementation of the multiply program, programming building blocks. Timer controls, check box, Radio buttons, list box, vertical and horizontal scroll bars and their programs.	Ex. No. : 20 a) Create shortcut keys to every menu options in the menu applications. b) Form creation
21	21	Button programs, drag & drop programs, column property, shortcut key, bar, menu & its applications. Introduction to dialog box and graphic controls and line control, Shape control picture, image control, picture control etc.	Ex. No. : 21 Practice on menu bar options and drop down menu options
22	22	Graphic methods points programs circles program ellipse, arcs and some simple programs. Displaying data in tabular formats, displaying and printing, fonts programs, show fonts, clipboard objects	Ex. No. : 22 Programs using conditional statements
23	23	Keys programs, upper program, keyboard focus, keyboard events, key procedures and some important functions.	Ex. No. : 23 Simple programs using looping statements
24	24	Combo Box, OLE directory, drive control in standard tool and their programs. Introduction to files, sequence, random files, opening, read and write mode.	Ex. No. : 24 Programs using functions
25	25	Introduction to OLE, DAO, RDO objects and their programs, programs for remote data objects, data access object	Ex. No. : 25 Program using arrays

SL.NO	WEEK NO	THEORY	PRACTICAL
26 & 27	26 & 27	<p>SQL, Data Program, Creating The data base and the table, properties and methods of the control. Introduction to multiple document interface creating the picture, code of the picture window list menu, adding cascade , tile and arrange icons items to the window menu.</p>	<p>Ex. No. : 26 Creating database and tables</p> <p>Ex. No. : 27 Code Practice</p>
28	28	<p>Designing text Editor programs, code implementation, Creating tool bar icons sending key strokes. Visual implementation of the data program.</p>	<p>Ex. No : 28 Creating tool bar icons</p>
29	29	<p>HYPertext MARKUP LANGUAGE (HTML) Basic Markup Tags – Hyper Links and Anchors -Building WWW Pages</p> <p>ADVANCED HTML Incorporating Graphics, Sound, Video, etc. -Image types (GIF and JPEG) - Creating images and Scanning</p> <p>CGI AND ADVANCED HTML The Common Gateway Interface (CGI) -Scripting languages -Creating Forms in HTML</p>	<p>Ex. No. : 29 Practice on HTML tags</p>
30	30	<p>SQL SERVER 7.0</p> <p>SQL Data Definition Language:</p> <p>CREATE Create Database-Use Database-Create Table-SQL Data Types-Create Index</p>	<p>Ex. No. : 30 Database-Create Table-SQL</p>

SL.NO	WEEK NO	THEORY	PRACTICAL
31	31	SQL Data Definition Language: ALTER and DROP Alter Database-Alter Table - drop Database- Drop Table - Drop Index-	Ex. No. : 31 Modification of Database, Table - drop
32	32	SQL Data Definition Language: Table Constraints NOT NULL Constraint- UNIQUE Constraint-Primary Key Constraint-Foreign Key Constraints	Ex. No. : 32 Table Constraints
33	33	SQL Data Manipulation Language: INSERT Insert one complete row-Insert one partial row Insert Multiple rows-SQL SELECT Statement-Basic Structure-Select *-Select Distinct-Conditional Select	Ex. No. : 33 SQL Data Manipulation
34	34	Relational Operators for SQL- LIKE clause-BETWEEN clause-IN clause- SQL AND & OR-SQL DELETE Statement - Delete *- conditional Delete- SQL	Ex. No. : 34 Practice on Relational operators
35	35	UPDATE Statement-Updating one column-Updating multiple columns-SQL Aggregate Functions-Average Count-Max-Min-Sum-SQL Group Functions-Group By clause-Having clause-Order By clause	Ex. No. : 35 Hands on functions
36	36	SQL Joins and Sub queries Modifying Data-Managing Tables and Constraints- Managing Views-Other Database Objects- User Access and security	Ex. No. : 36 SQL Joins and Sub queries Managing tables

SL.NO	WEEK NO	THEORY	PRACTICAL
37 & 38	37 & 38	<p>RELATED DATA BASE MANAGEMENT SYSTEM</p> <p>Introduction to Databases with MS Access</p> <p>Getting started, Navigating the database -Changing & adding records in a database-Filtering records from a database- Understanding the database - Tables, Querying the database -More about Queries -Reports from a Database –</p>	<p>EX.No.:37</p> <p>Changing & adding records in a database-Filtering</p> <p>EX.No.:38</p> <p>Create Reports from a Database –</p>
39	39	<p>Creating a Database Table using GUI interface-Changing the Table Design using GUI interface- Entering & Importing Data -Creating a Form -Changing a Form Design -Adding Tables & Relationships</p>	<p>EX.No.:39</p> <p>Creating a Database Table using GUI interface</p>
40	40	<p>The Relational Data Model (RDBMS)</p> <p>Database Theory-RDBMS (Relational Databases Management Systems) introduction. -RDBMS Theory and principles - Primary Keys and Foreign Keys-Data integrity and Referential Integrity- Entity Relationship Modelling ERM, Schema and ER Diagrams.</p>	<p>Ex.No.:40</p> <p>ER Diagrams.</p>
41	41	<p>Oracle 9i SQL</p> <p>SQL*Plus Overview- Basic SQL SELECT Statements-Single-Row Functions-Aggregating Data and Group</p>	<p>Ex.No.:41</p> <p>Over view of SQL SELECT Statements</p>

SL.NO	WEEK NO	THEORY	PRACTICAL
42	42	Functions- Joins and Sub queries - Modifying Data- Managing Tables and Constraints- Managing Views- Other Database Objects- User Access and Security	Ex.No.:42 Familiarization on functions
43	43	FOXPRO Introduction: - What is database, Simple and relational database, dbase Vs Foxpro, Introduction to menu surface, dialogue box and Editor , Foxpro technical specifications.	Ex.No:43 Creating a file. Practice on various menus
44	44	Database:- Creating database, creating new database, defining structures, field names and their limitations, copying and Modifying structure of database file.	Ex.No.:44 Editing a File using related Edit commands. (EDIT,APPEND,BROWSE etc.,)
45	45	Handling database, Appending, Editing, Browsing, Deleting, Indexing, Simple and compound indexes, Sorting, searching using Locate ,Find, Found, Continue, Seek, query and logical operations.	Ex.No.:45 a)Sorting & Indexing a file. b)Searching a field.
46	46	Report Generations- report Menu, Layout Tools, Page layout, page preview, Quick reports etc., mailing Labels- Label Layout and Printing. Screen Builder. Creating Screen layouts, controlling screen design and generation codes, Menu builder	Ex.No.:46 a)Report Generation. b)Mailing labels
47	47	Designing Menu, Menu commands. Defining menus, query understanding relational database, working with view window, relational query by example.	Ex.No:47 a)Creating Screen layouts. b)Designing Menus, query.

SL.NO	WEEK NO	THEORY	PRACTICAL
48	48	Advanced Techniques:- Keyboard macro, Recording, Editing and using macro Append from command, colors command files-How to create, modify, run command files & all its related commands, Procedure files, Fox pro functions.	Ex.No:48 a)Macro Creation, recording & Editing. b) Using Different function commands.
49 & 50		Project on any one of the following <ul style="list-style-type: none">• Visual basic• Visual Fox pro• SQL	Ex.No.:49 & 50 Project
51	51	INTERNAL EXAMINATION	
52	52	COMMON EXAMINATION	

Industrial School

Long Term Trade - Syllabus – Revised

Name of the Trade: **ADVANCED INTEGRATED SOFTWARE TECHNOLOGY**

Space required:

Computer / Lab : 300 Sq. ft.

Class Room : 200 Sq. ft.

Trade Theory : NO CHANGE

Trade Practical : NO CHANGE

TOOLS AND EQUIPMENT FOR THE TRADE ADVANCED INTEGRATED SOFTWARE TECHNOLOGY:

HARDWARE REQUIREMENTS

S. NO	NAME OF THE ITEM	QUANTITY REVISED
1	SERVER Pentium Processor 4 256 MB RAM 40 GB HDD 1.44 MB FDD SVGA COLOUR MONITOR 14" 101 WINDOWS KEYBOARD, INTELLI MOUSE, INTERNAL MODEM 16 BIT ETHERNET CARD INTERNET CONNECTION 17 NODES with CD writer	01
2	WORK STATION Pentium Processor 4 256 MB RAM 2 GB HDD 1.44 MB FDD SVGA COLOUR MONITOR 14" 101 WINDOWS KEYBOARD, INTELLI MOUSE, INTERNAL MODEM 16 BIT ETHERNET CARD WITH INTERNET CONNECTION	04

3	5 KVA ONLINE UPS	01
4	HP LASER JET PRINTER (COLOUR)	01
5	DOT MATRIX PRINTER	01
6	OPTICAL SCANNER	01
7	FLOPPY DISK 3 1/4"	100
8	REWRITABLE CD's	20
9	VACCUM CLEANER	01
10	CHAIR AND TABLE FOR INSTRUCTOR //	01 SET
11	COMPUTER TABLE SUNMICA TOP 1050 X 650 X 750 MM SLIDING TRAY FOR KEYBOARD AND ONE SHELF FOR STORAGE	05
12	OPERATOR CHAIR	10
13	ROOM THERMOMETER	01
14	DOOR MAT	01
15	WALL CLOCK	01
16	PRINTER TABLE 650X500X750 MM	02
17	WINDOW TYPE AC 1.5 TONS WITH STABILIZER	03
18	STORAGE CABINET 600X700X450 MM	01
19	STUDENTS SHOE RACK	01
20	16 PORT HUB FOR LAN.	01
21	RJ45 CONNECTORS CAT 5 CABLE FOR LAN	01
22	NOVELL NETWARE 3.12 OR HIGHER VERSION 20 USER	01
SOFTWARE REQUIREMENTS		
S.No.	Required Items	Quantity
1	MS-DOS OS (HIGHER VERSION)	01
2	WINDOWS XP	10
3	MS OFFICE	01
4	VISUAL STUDIO LATEST VERSION	01
5	SCO UNIX	01
6	SQL SERVER	01

ACHIEVEMENTS

- 1. Learning Fundamentals of Computer.**
- 2. Developing Programming Knowledge**
- 3. Gaining Office Automation works.**
- 4. Obtaining Experience on working in various Operating Platforms.**
- 5. Experience on latest Technology.**
- 6. Knowledge in computer Hardware & Software Installation.**
- 7. Experience through Project Development to Focus the Skill**
- 8. Create a Web design.**
- 9. To Develop Programs from planning and flow charting to Coding and debugging.**
- 10. Learning VISUAL BASIC, FOXPRO , SQL.**
- 11. Provide Hands-on- Experience on PC's**
