

CSIF YOUTH EMPOWER PROGRAM THROUGH ICT WEB DEVELOPMENT ACTIVITY PLAN

MATERIALS NEEDED

- **Laptop**
- **Desktop**
- **Projector**
- **Tablet**
- **Flash Drive**
- **CD or DVD Rewritable**
- **Printer**
- **Microsoft Visual Studio Application**
- **Expression Web Application**
- **SQL Database**
- **Microsoft Frontpage Application**
- **SQL Server**

JANUARY

CC-307 Web-Site Development - I (ASP.NET)

Course Introduction:

This course aims to make the students capable to develop a web site using well known client-server technology ASP.NET. Through this course, student will learn the basic concepts of Microsoft client-server technology like CLR, PI, web pages and its different web controls, validation controls, ADO.NET, HTTP objects and file handling.

Objectives:

The student would be able

- 1) To get the practical knowledge of ASP.NET
- 2) To develop website using visual studio web development environment.
- 3) To know the framework architecture of .NET
- 4) To work with disconnected architecture of ADO.NET and can store and retrieve data easily from database.

No. of Credits: 3

Theory Sessions per week: 4

Teaching Hours: 40 hours

UNIT	TOPICS / SUBTOPICS	TEACHING HOURS
1	Introduction <ul style="list-style-type: none">• The .Net Platform and the Web ○<ul style="list-style-type: none">The Pathway to Web Application<ul style="list-style-type: none">○ The Web Client/Server Model ○ Components of ASP.NET and the .NET framework○ Overview of IIS ○ Overview of ASP.NET○ Language Independence in the .NET framework	10 hours

	<ul style="list-style-type: none"> • Working with ASP.NET <ul style="list-style-type: none"> ○ The Features of ASP.NET ○ The Anatomy of ASP.NET Pages ○ Introducing Web Forms ○ Visual Studio IDE Basics <ul style="list-style-type: none"> ○ Code-Behind feature • Application Configuration <ul style="list-style-type: none"> ○ Over view of Global.asax file and Web.config file 	
	<ul style="list-style-type: none"> • Web controls for Displaying and Formatting Data Following properties should be consider in each control of ASP.NET <u>Properties</u> <ul style="list-style-type: none"> AccessKey BackColor BorderWidth BorderStyle CSSClass Enabled Font.Bold Font.Italic Font.Name Font.Overline Font.Size Font.Strikeout Font.Underline ForeColor Height TabIndex ToolTip 	

	<ul style="list-style-type: none"> • Width Id Runat Text • Label ○ Setting Properties <ul style="list-style-type: none"> BorderStyle BorderWidth Panel ○ Setting Properties <ul style="list-style-type: none"> • BackImageUrl HorizontalAlign Wrap <ul style="list-style-type: none"> ○ Add runtime control/s in panel Table ○ Setting Properties <ul style="list-style-type: none"> BackImageUrl CellSpecing CellPadding GridLines HorizontalAlign 	
	<ul style="list-style-type: none"> • TableRow ○ Setting Properties <ul style="list-style-type: none"> HorizontalAlign VerticalAlign • TableCell controls <ul style="list-style-type: none"> ○ Setting Properties <ul style="list-style-type: none"> ColumnSpan RowSpan HorizontalAlign VerticalAlign Wrap 	
2	Web Controls	

FEBRUARY

Web Controls for Creating Buttons

- **Button , Image Button, Link Button** ○ Setting Properties
 - Command
 - CommandArgument
 - ImageUrl (Only for Image Button) ○
 - Event
 - OnClick

- **Web Control for Inputting Text**

- **Textbox**
 - Setting Properties
 - AutoPostBack
 - TextMode
 - Columns
 - MaxLength
 - Rows
 - Text
 - Wrap ○
 - Event
 - OnTextChanged

- **Web Controls for Selecting Choices**

- **CheckBox**
 - Setting Properties
 - AutoPostBack
 - Text
 - TextAlign
 - Checked

- Event
 - OnCheckedChanged

- **RadioButton** ○ Setting
 - Properties
 - AutoPostBack
 - Checked
 - GroupName
 - Text
 - TextAlign ○
 - Event
 - OnCheckedChanged
- **CheckBoxList , RadioButtonList** ○
 - Setting Properties
 - AutoPostBack
 - CellPadding
 - DataSource
 - DataTextField
 - DataValueField
 - RepeatColumns
 - RepeatDirection
 - RepeatLayout
 - TextAlign
 - Items
 - SelectedIndex
 - SelectedItem
 - SelectedItems (only for CheckBoxList) ○
 - Event
 - OnSelectedIndexChanged
- **Web Controls for Creating Lists**
- **ListBox , DropDownList** ○
 - Setting Properties
 - DataSource
 - DataTextField
 - DataValueField
 - AutoPostBack
 - Rows
 - SelectionMode(Only for ListBox) ○
 - Event
 - OnSelectedIndexChanged

- **Rich Controls**

- **Calendar**

- Setting Properties

CellPadding

CellSpacing

DayHeaderStyle

DayNameFormat

DayStyle

FirstDayofWeek NextMonthText

NextPrevFormat

NextPrevStyle

OtherMonthDayStyle

PrevMonthText

PrevMonthText

SelectedDate

SelectedDates

SelectedDayStyle

SelectionMode

SelectMonthText

SelectorStyle

SelectWeelText

ShowDayHeader

ShowGridLine

ShowNextPrevMonth

ShowTitle

TitleFormat

TitleStyle

TodayDayStyle

TodayDate

VisibleDate

WeekendDayStyle ◦

- Events

DayRender

SelectionChanged

VisibleMonthChanged

	<ul style="list-style-type: none"> • AdRotator ○ Setting Properties <ul style="list-style-type: none"> AdvertisementFile OnAdCreated KeywordFilter Target • File Upload • Other Controls 	
	<ul style="list-style-type: none"> • Hyperlink <ul style="list-style-type: none"> ○ Setting Properties <ul style="list-style-type: none"> NavigateUrl Text ImageUrl Target • Image <ul style="list-style-type: none"> ○ Setting Properties <ul style="list-style-type: none"> ImageUrl AlternateText ImageAlign • Image Map <ul style="list-style-type: none"> ○ Setting Properties <ul style="list-style-type: none"> HotSpotMode HotSpots ImageUrl AlternateText 	
	<ul style="list-style-type: none"> • ASP.NET Page Directives ○ <ul style="list-style-type: none"> @Page ○ @Control ○ @Import ○ @Register ○ @Assembly ○ @OutputCache 	
3	Validation Controls ASP.NET Objects and Data Collection Class	

MARCH

Validation Controls

Following properties should be considered in each Validator control of ASP.NET

Properties

ControlToValidate

Display

Enabled

ErrorMessage

ForeColor

IsValid

- **Required FieldValidator Control**

- **CompareValidator Control** ○

Setting Properties

ControlToCompare

Operator

Type

ValueToCompare

- **RangeValidator Control**

- Setting Properties

MaximumValue

MinimumValue

- **RegularExpressionValidator Control** ○ Setting Properties

ValidationExpression

- **Introduction to Custom Validator control** ○

Setting Properties

ClientValidationFunction OnServerValidate

	<ul style="list-style-type: none"> • Data List Controls • Repeater Control and DataList Control ○ Template <ul style="list-style-type: none"> AlternatingItemTemplate FooterTemplate HeaderTemplate ItemTemplate SeparatorTemplate • Introduction of GridView Or DataGrod Control (Simple Demo of view records using above control) • Introduction of FormView and Detail View Contorls (Simple Demo of edit, delete and insert records using above control) 	
	<ul style="list-style-type: none"> • Authoring a User Control ○ <ul style="list-style-type: none"> Login Control ○ LoginView Control ○ LoginStatus Control ○ LoginName Control ○ PasswordRecovery Control 	
	<ul style="list-style-type: none"> • ASP.NET Intrinsic Objects ○ The <ul style="list-style-type: none"> HttpRequest Object ○ The HttpResponse Object ○ The HttpApplicationState Object ○ The HttpSessionState Object 	
<p>4</p>	<p>I/O and ADO.NET</p> <ul style="list-style-type: none"> • Handling File I/O ○ Reading <ul style="list-style-type: none"> Text Files ○ Writing Text Files ○ Binary Files I/O ○ Performing File Operations ○ File Information 	
	<ul style="list-style-type: none"> • ADO.NET <ul style="list-style-type: none"> ○ ADO.NET Programming Objects and Architecture ○ Displaying Database Data ○ Working with The Data Set and Data Table Objects 	

Note:

- (1) These topics can be covered using any version of .NET framework and Visual Studio. Therefore, there will be NO restriction in using the version available with the institute.**
- (2) VB.NET programming language should be used with ASP.NET**
- (3) Database should be any version of Ms Access or SQL Express Edition**

Textbook:

ASP.NET and VB.NET Web Programming

Publisher: Pearson

By Matt J. Crouch

Chapter – 1 (1.1, 1.2, 1.3, 1.4, 1.5)

Chapter - 3 (3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.8, 3.9, 3.10, 3.11, 3.12, 3.13, 3.14, 3.15, 3.16, 3.17, 3.18, 3.19, 3.23.1, 3.23.2, 3.24.4, 3.24.5)

Chapter – 4 (4.3.1, 4.3.2, 4.3.3, 4.3.4, 4.3.5, 4.3.6, 4.3.7) **Chapter – 7** (7.1, 7.2, 7.3, 7.4, 7.6)

Reference Book:

ASP.NET Developer's Guide

Publisher: McGraw Hill

By Gerg Buczek

APRIL

CC-308 Database Administration

Course Introduction:

This course will help students to develop the database administration capabilities and will discuss how to create and manage database, users, roles and resources. It also gives them in depth knowledge of important features of Oracle database administrator.

Prerequisite:

Student should have knowledge about database management system and structured query language.

Objectives:

The student would be able

- 1) To obtain knowledge about the basics of database administration.
- 2) To understand how to maintain a database quickly & accurately.
- 3) To design, manage and solve the issues related to the database server.

No. of Credits: 3

Theory Sessions per week: 4

Teaching Hours: 40 hours

UNIT	TOPICS / SUBTOPICS	TEACHING HOURS
1	Understanding Oracle Architecture , Administering Databases and Tablespace , Creating Database	10 hours
	<ul style="list-style-type: none">• Oracle Database Structure ○<ul style="list-style-type: none">Logical Database Structure ○Physical database structure ○Oracle Instance<ul style="list-style-type: none">Memory StructuresThe SGAThe PGA○ Oracle Processes<ul style="list-style-type: none">The DBWR	

	<p>LGWR CKPT SMON and PMON ARCH and RECO LCNn and Dnnn</p> <ul style="list-style-type: none"> ○ Types of Database Architecture <ul style="list-style-type: none"> Client/Server Architecture Multi-tier Architecture ○ Database users and administrators <ul style="list-style-type: none"> Types of Oracle Users 	
	<p>Responsibilities of database Administrator Database Administrator Privileges</p>	
	<ul style="list-style-type: none"> • Creating Databases <ul style="list-style-type: none"> ○ Using the CREATE DATABASE Statement ○ Creating Tablespaces ○ Building Data Dictionary views ○ Tablespaces <ul style="list-style-type: none"> Considerations for managing tablespaces Types of tablespaces Altering and dropping tablespaces Moving tablespaces between databases Retrieving Tablespace Information 	
2	Managing Physical Files	
	<ul style="list-style-type: none"> • Control Files <ul style="list-style-type: none"> ○ Considerations for managing Control Files ○ Creating and Dropping Control Files ○ Backing up and Recovering Control Files ○ Retrieving Control Files Information <ul style="list-style-type: none"> Online Redo log files Creating online redo log groups <ul style="list-style-type: none"> Relocating, renaming and dropping redo log files Retrieving online redo log files information 	

	<ul style="list-style-type: none"> ○ Archived redo log files <ul style="list-style-type: none"> Managing archived redo log files Defining the location and mode of archived redo log files Retreiving archived redo log file ○ Data files <ul style="list-style-type: none"> Considerations for managing datafiles Renaming, relocating and dropping datafiles Retrieving datafiles information 	
	<ul style="list-style-type: none"> • Administering Users, Privileges and Roles <ul style="list-style-type: none"> ○ Managing profiles and users <ul style="list-style-type: none"> Prerequisites to work with profile Creating profiles Altering and dropping profiles ○ Creating Users <ul style="list-style-type: none"> Altering and dropping users Retrieving information about profiles and users ○ Managing Privileges <ul style="list-style-type: none"> Granting and revoking system level privileges Granting and revoking object level privileges Retrieving information about privileges 	
	<ul style="list-style-type: none"> ○ Managing Roles <ul style="list-style-type: none"> System level roles Creating roles Granting and revoking roles from users Enabling and disabling roles Altering and dropping roles Retrieving information about roles 	
3	Indexes and Cluster	
	<ul style="list-style-type: none"> • Overview of Indexes <ul style="list-style-type: none"> ○ Need for indexes ○ Guidelines for creating, dropping or disabling Indexes ○ Creating Indexes <ul style="list-style-type: none"> Unique and non-unique Indexes Composite Indexes Function based Indexes B-tree Indexes Bitmap Indexes 	

	<ul style="list-style-type: none"> Reverse key Indexes Index organized tables ○ Administering Indexes Partitioning Indexes Rebuilding Indexes Coalescing Indexes Checking validity of Indexes Dropping Indexes Retrieving information about Indexes 	
	<ul style="list-style-type: none"> • Clusters <ul style="list-style-type: none"> ○ Creating Clusters ○ Creating clusters tables ○ Creating clustered indexes ○ Altering Clusters ○ Dropping Clusters ○ Hash Clusters 	
4	Optimizing Database Performance & Backup and Recovery	
	<ul style="list-style-type: none"> • Overview of an Optimizer <ul style="list-style-type: none"> ○ Types of optimizers ○ Optimizer Operations ○ Generating Statistics ○ Tuning SQL statements ○ Explain_plan statement ○ Creating the Plan_table output table 	
	<ul style="list-style-type: none"> ○ Executing the Explain_Plan statement ○ Querying the Plan_table output table ○ Tuning oracle databases ○ Tuning memory usage ○ Tuning data storage ○ Tuning physical storage ○ Tuning logical storage 	
	<ul style="list-style-type: none"> • Backup and Recovering Data <ul style="list-style-type: none"> ○ Backing up data ○ Planning data backup ○ Types of backup ○ Using Export Utility ○ Using Import Utility ○ Using Offline Backup 	

<ul style="list-style-type: none">• ○ Using online backups <p>Recovering Data ○ Planning Data Recovery ○ Types of Recovery ○ Data Structures for Recovering Data ○ Recovery Manager Commands ○ Recovery using RMAN commands</p>	
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Textbook:

Administering Oracle (First Edition 2004)

Publisher: BPB Publications

By Ivan Byross

Reference Books:

1. Beginning Oracle Database 11g Administration

Publisher: Apress Publications

By Iggy Fernandez

2. Database Administration: Implementation and Administrator Publisher:

Cengage Publications

By Gavin Powell, Carol McCullough-Dieter

3. Oracle 11g Administration in Simple Steps Publisher: Dreamtech Publications By Kogent Learning Solutions Inc.

MAY

CC-309 Ecommerce

Course Introduction:

The growth of the Internet continues to have a tremendous influence on the way business is conducted. Companies and organizations of all types and sizes are rethinking their strategies and how they run their operations. This course will help students explore the realities and implications of e-commerce as well as learn the different e-commerce models like Business-toConsumer (B2C) and Business-to-Business (B2B) etc. The course introduces students to a wide range of electronic commerce issues, as a foundation for continual learning in the dynamic ecommerce environment.

Objectives:

The student would be able:

- 1) To gain an understanding of the theories and concepts underlying e-commerce.
- 2) To apply e-commerce theory and concepts to what is happening in "the real world".
- 3) To improve familiarity with current challenges and issues in e-commerce.
- 4) To study the security issues related to e-commerce.

No. of Credits: 3

Theory Sessions per week: 4

Teaching Hours: 40 hours

UNIT	TOPICS / SUBTOPICS	TEACHING HOURS
1	Introduction to E- Commerce	10 Hrs
	<ul style="list-style-type: none">• E-Commerce: The revolution is just beginning<ul style="list-style-type: none">○ What is E-Commerce?○ The difference between E- Commerce and E-Business○ Eight Unique Features of E-Commerce Technology○ Introduction to Web 2.0○ Types of E-Commerce	
	The Internet and World Wide Web : E-Commerce Infrastructure	
	<ul style="list-style-type: none">• The Internet: Technology Background<ul style="list-style-type: none">○ The Evolution of the Internet 1961 – the Present○ The Internet : Key Technology Concepts○ Other Internet Protocols and Utility Programs• The Internet Today<ul style="list-style-type: none">○ The Internet Backbone	

	<ul style="list-style-type: none"> ○ Internet Exchange Points ○ Campus Area Networks (CANs) ○ Internet Service Providers ○ Internets and Extranets <p>Introduction to Internet 2</p> <ul style="list-style-type: none"> • • The Internet and the Web: Features 	
	<ul style="list-style-type: none"> ○ E-mail ○ Instant Messaging ○ Search Engines ○ Intelligent Agents (Bots) ○ Online Forums and Chat ○ Streaming Media ○ Cookies 	
2	Online Security and Payment System	
	<ul style="list-style-type: none"> • The E-Commerce Security Environment <ul style="list-style-type: none"> ○ Scope of the problem ○ What is good E-commerce security? ○ Dimensions of E-commerce security ○ The tensions between security and other values • Security Threats in the E-Commerce Environment <ul style="list-style-type: none"> ○ Malicious code ○ Unwanted programs ○ Phishing and Identity theft <ul style="list-style-type: none"> ○ Hacking and Cyber vandalism ○ Credit Card Fraud/Theft ○ Spoofing and Spam Web Sites ○ Sniffing ○ Insider attacks ○ Poorly designed server and client software ○ Technology solution ○ Protecting Internet communications <ul style="list-style-type: none"> ○ Encryption (excluding: limitation of encryption solutions) • 	
3	Payment Systems, Social Networks and Online Auctions	
	<ul style="list-style-type: none"> • Types of Payment systems <ul style="list-style-type: none"> ○ Cash ○ Checking transfer ○ Credit card ○ Accumulating balance • E-Commerce payment systems 	

	<ul style="list-style-type: none"> ○ Online credit card transaction ○ Digital wallets ○ Digital cash ○ Online stored value systems ○ Digital accumulating balance payment systems ○ Digital checking payment systems ○ Wireless payment systems 	
	Social Networks, Auctions and Portals	
	<ul style="list-style-type: none"> • Social Networks and Online Communities ○ What is online social network? 	
	<ul style="list-style-type: none"> ○ Difference between Social networks and Portals ○ Social network features and technologies ○ The future of social networks • Online Auctions ○ Defining and measuring the growth of auctions and dynamic pricing <ul style="list-style-type: none"> ○ Why are Auctions so popular? Benefits and costs of Auctions (excluding: market-maker benefit) ○ Types and examples of Auctions 	
4	Ethical, Social and Political issues in E-commerce	
	<ul style="list-style-type: none"> • Understanding Ethical, Social and Political Issues in E-Commerce <ul style="list-style-type: none"> ○ A model for organizing the issues ○ Basic ethical concepts: responsibility, accountability and liability ○ Analyzing ethical dilemmas ○ Candidate ethical principles • Intellectual property rights ○ Types of Intellectual property protections ○ Copyrights: the problem of perfect copies and encryption ○ Patents: business methods and processes ○ Trademark: online infringement and dilution • Governance ○ Public government and law ○ Introduction to Taxation 	

Textbook:

E-Commerce – Business, Technologies, Society (2008), 4th Edition

Publication: Pearson

Kenneth C. Laudon, Carol Guercio Traver

Reference Books:

1. E-Commerce Strategy, Technology and Implementation

Publication: Cengage Learning

By Gary P. Schneider

2. Electronic commerce

Publication: TATA Mc Graw Hill

By Bharat Bhasker

3. Electronic Commerce A Managers' Guide Publication: Pearson

By Ravi Kalakota, Andrew B. Whinston

4. Electronic Commerce A simplified Approach

Publication: JAICO

By Munesh Chandra Trivedi

5. e-Business 2.0

Publication: Pearson

By Ravi Kalakota, Marcia Robinson

JUNE

CC-310 *CC-307 Practical

Course Introduction:

This course makes the student capable to develop a web site using well known client-server technology ASP.NET. Through this course, student will learn the basic concepts of Microsoft client-server technology and its different web controls, validation controls, ADO.NET, HTTP objects and file handling.

Objectives:

The student would be able

- 1) To get hands on experience on Visual Studio.Net.
- 2) To develop Web application using ASP.Net.
- 3) To work with disconnected data base architecture of ADO.Net.

No. of Credits: 3

Practical Sessions per week: 3

Teaching Hours: 40 hours

The students are expected to write programs unit wise as given below.

The list in each unit is **indicative only and may or may not be asked in the examination.**

UNIT	TOPICS / SUBTOPICS	TEACHING HOURS
1	Introduction	10 hours
1	Create an application which count the total number of users visited the page. (Using global.asax).	
2	Create web page which will display School mark sheet using table control.	
3	Create web page which will show the score card of Indian cricket match using Table Control.	
4	Create web page which will ask the employee personal detail, education detail, work experience detail with use different panel for each part.	
5	Create web page which will ask payment detail of customer purchase, this detail either in Cash or Credit/Debit card or by Cheque. According to the payment mode panel control will display and accept payment detail and display all that detail in next page using label control.	
6	Create a Electricity bill web page using Tables controls	

	7	Write a program that displays a label in green color and it should change into yellow when the mouse moves over it.	
2	Web Controls		
	1	Write a simple ASP.NET program to display the following Web Controls: <ul style="list-style-type: none"> • A button with text “click me”. The button control must be in the center of the form. A label with a text hello • A checkbox. The form name must be Web Controls	
	2	Write a program to display “Hello World” in the form when the “click” button is clicked. The Form title must be ASP.NET.	
	3	Write a program containing the following controls: <ul style="list-style-type: none"> • A ListBox • A Button • An Image • A Label The listbox is used to list items available in a store. When the user clicks on an item in the listbox, its image is displayed in the image control. When the user clicks the button, the cost of the selected item is displayed in the control.	
	4	Extend the above program to add the following controls: <ul style="list-style-type: none"> • Two labels • A TextBox • A Button One of the labels is displayed adjacent to the textbox, displaying the message “Enter the quantity:” When the user enters the quantity in the textbox and clicks the button, the total cost is evaluated and displayed in another label.	
	5	Create a RadioButtonList that displays the names of some flowers in two columns. Bind a label to the RadioButtonList so that when the user selects an option from the list and clicks on a button, the label displays the flower selected by the user.	
	6	Create a user control that contains a list of colors. Add a button to the Web Form which when clicked changes the color of the Form to the color selected from the list.	
	7	Create a new Web form which allows the client to enter student information such as name, email address, sex and telephone number. The page also provides a submit button, which when clicked, will add this information to a TextBox which will also be displayed on the same page.	

	8	Create a product catalog facility for an online mobile store. The web page will display multiple mobile phone photos and their prices. When user clicks on any particular photo, he or she should be navigated to the page for that mobile. This page will contain all details and features of selected mobile phone.	
	9	Develop an application which allow user to upload a .jpeg file and display it in an image box on the same page.	
3	Validation Controls ASP.NET Objects and Data Collection Class		
	1	Write a program that gets user input such as the user name, mode of payment, appropriate credit card. After the user enters the appropriate values the Validation button validates the values entered.	
	2	Create a Form that receives the user name, address, date, nationality, country preferred for working and skill sets from the user. The country preferred data should appear in a dropdownlist whereas; others should be entered in a textbox. Validate all the controls. The Form is named "formexp.aspx".	
		The date should appear between "1/1/1900" and "1/1/2090".	
	3	Create a user control that receives the user name and password from the user and validates them. If the user name is "ASP" and the password is "NET" then the user is authorized, otherwise not.	
	4	Write a simple Web application which keeps track of the number of times a user has visited the page from the same machine. The application keeps track of this information by storing this counter value in a persistent cookie at the client's machine.	
	5	Accept ItemCode, ItemName, ItemPrice and Qty from the user, store it as cookies and then display them on the next page.	
	6	Show an example of how your Web application can read from a database table using a DataReader class, and show the information in a DataGrid for display in your Web page.	
	7	Create a table StudentInfo, which contain rollno, name and year of a student. And also create a table StudentScore which contain marks of three subjects for each student. Display name of all the students in a DropDownList and according to user's choice, particular student record should display in a FormView/DetailView control.	
4	I/O and ADO.NET		

1	Create a Global.asax file with Application variables cont, color1 and gotohp. Create a Session variable called cont1. Initialize cont as 0 and assign any color to color1. For the variable gotohp, give a hyperlink to any Website. Use the variables in a Web Form.	
2	Create a Table, which displays two columns and three rows. The first row displays eno, the second displays ename and the third displays esal, all of these being retrieved from the emps table. Each of the above is displayed as a drop-down list, containing all the values of the corresponding column in the table.	
3	Develop a web application to reserve online in a hotel. The user should enter date of arrival, number of days, room type, number of persons etc. He would be able to confirm booking and allowed to pay advance on confirmation.	
4	Create an application to display all records from an Employee table with proper formatting.	
5	Write a simple Web application which reads off a table in an Access database file and display the data in a Web form.	
6	Write a simple CRUD (Create, Read, Update, Delete) Web application which reads, updates, inserts and deletes rows from the StudentInfo table which you have created for the previous exercise.	
7	Develop an application for online booking for a picture in a cinema hall. User should be able to select date, time, picture and tickets. If the tickets are available user should be able to generate ticket.	
8	Design master page which contain information about your college. Display College title with different properties. Take	
	two contain pages have following:- <ul style="list-style-type: none"> • Contain Page 1 : Design attractive page have all possible operations on given database (Add, Delete, update, Select) • Contain Page 2 : Use repeater control does display all records from table. Table: Student (Roll No, Name, Date of birth, total) 	
9	Create web page which will transfer text file data from client pc to server using I/O	
10	Crate web page which will create copy of file given by the user.	
11	Create web page which will delete file given by the user from the web site folder.	
12	Create web page which will display details of file, selected by the user.	

Note:

- (1) **These topics can be covered using any version of .NET framework and Visual Studio. Therefore, there will be NO restriction in using the version available with the institute.**
- (2) **VB.NET programming language should be use with ASP.NET.**
- (3) **Database should be any version of Ms Access or SQL Express Edition.**

Textbook:

ASP.NET and VB.NET Web Programming

Publisher: Pearson

By Matt J. Crouch

Reference Book:

ASP.NET Developer's Guide

Publisher: McGraw Hill

By Gerg Buczek

JULY

CC-311 Multimedia Tools (Practical)

Course Introduction:

Multimedia offers exciting possibilities for meeting the needs of 21st century learners. The tools available for multimedia can enhance the student learning. This course helps the students in understanding the basic concepts of creating interactive animation. The student would be able to get a deep knowledge about 2D animation tool and will be able to have a glance of 3D animation tool.

Objectives:

The student would be able to

- 1) Familiarize with 2D and 3D Animation environment.
- 2) Create visual elements and object of their imagination.
- 3) Can make advertisement and designs.
- 4) Learn to add sound, text, video in animation.

No. of Credits: 3

Practical Sessions per week: 3

Teaching Hours: 40 hours

UNIT	TOPICS / SUBTOPICS	TEACHING HOURS
1	Introduction to Flash environment.	10 hours
	<ul style="list-style-type: none"> • Tool bars <ul style="list-style-type: none"> ○ Main toolbar ○ Status bar ○ Controller bar 	
	<ul style="list-style-type: none"> • Stage and work area <ul style="list-style-type: none"> ○ Workspace ○ Stage ○ Scenes ○ Layers ○ Key frames 	
	<ul style="list-style-type: none"> • Working with panel <ul style="list-style-type: none"> ○ Info panel ○ Transform Panel ○ Align Panel ○ Color Mixer Panel ○ Property Panel ○ Library ○ Action Panel ○ Common Library ○ Scene Panel ○ Color Swatches 	
2	Familiar with tools & timeline And work with text & symbols.	
	<ul style="list-style-type: none"> • Tools (with tools Property) <ul style="list-style-type: none"> ○ Selection ○ Sub Selection ○ Free Transform Too ○ Gradient Transform tool ○ Line ○ Lasso tool ○ Pen tool ○ Text ○ Oval ○ Rectangle ○ Pencil ○ Brush ○ Ink Bottle ○ Paint Bucket tool ○ Eyedropper ○ Eraser tool • Timeline 	

	<ul style="list-style-type: none"> • Text and its property <ul style="list-style-type: none"> ○ Static text ○ Dynamic text ○ Input text 	
	<ul style="list-style-type: none"> • Symbols ○ <ul style="list-style-type: none"> Graphics ○ Movie clip ○ Buttons 	
3	Animation, sound and Publishing files	
	<ul style="list-style-type: none"> • Animations ○ Motion tweening ○ Frame-by-frame ○ Shape tweening 	
	<ul style="list-style-type: none"> ○ Character tweening ○ Masking ○ Guided motion tween 	
	<ul style="list-style-type: none"> • Sound ○ Adding Sound ○ Stop Sound ○ Importing sound files ○ Placing sound files in keyframes 	
	<ul style="list-style-type: none"> • Publish files ○ As Shockwave flash file(SWF) ○ HTML file ○ Jpg ○ Gif ○ EXE file 	
4	Action Script and Introduction of 3D animation software	
	<ul style="list-style-type: none"> • Action Script <ul style="list-style-type: none"> _x (current x coordinate) _y (current y coordinate) If() else statements 	
	<ul style="list-style-type: none"> ○ Timeline Control <ul style="list-style-type: none"> All actions ○ Movie clip control <ul style="list-style-type: none"> setProperty(), getProperty(), startDrag(), on(), stopDrag() ○ Browser/Network <ul style="list-style-type: none"> fscommand – quit , fullscreen, getUrl(), loadMovie(), loadMovieNum(), fullscreen 	

<ul style="list-style-type: none"> • 3D animation software <li style="padding-left: 20px;">Interface and navigation <li style="padding-left: 20px;">Creating 3D object <li style="padding-left: 20px;">Animating 3D object <li style="padding-left: 20px;">Materialize property <li style="padding-left: 20px;">Lighting effect setting 	
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Note:

- (1) **2D animation topics can be covered using any version of Flash. Therefore, there will be NO restriction in using the version available with the institute.**
- (2) **For 3D animation, the institute may use any open source multimedia software.**
- (3) **Questions based on 2D animation tool should only be asked in examination.**

The students are expected to create animation as listed below.

The list is **indicative and may or may not be asked in the examination.**

1. Create an animation on the theme of Uttarakhand.
2. Create an application with 2 scenes.
 - Scene 1: Make the use of Masking and display a message.
 - Scene 2: Create an application which generates the mark sheet of the students. Also assigns the grades as per the percentage. The rules to be followed for the grades are as follows:
 - If Percentage is <40 = F Grade If between 80 to 90 = A Grade
 - If between 40 to 50 = D Grade More than 90 = A+ Grade
 - If between 50 to 60 = C Grade
3. Create an application which follows a hierarchy as below:
 - Scene 1: Accepts User Name and Password. If they are correct then traverse them to next scene/file.
 - Scene 2: It has 2 options (Animals and birds). As the option is selected we traverse them to next scene.
 - Scene 3: According to the selected option display slideshow for it. Along with it there should be a link for explanation. When clicked on it the explanation for same should be displayed.

Each and every scene should contain back and home buttons.
4. Create the EXE and run in full screen mode. Create the movie with the scenes as below:
 - scene1: “WELCOME” AND CREATED BY: “YOUR NAME” gives the effects of your choice and a button to go to index.
 - Scene2: index with the title scene1 and scene3. Clicking on a particular scene should run only that scene and there should be button to go back to the index in each scene.
5. Create an application stormy day with rain fall and dark clouds moving. The application should have Replay and Quit buttons. If replay button is clicked the animation should start.

Reference Books:

1. Macromedia FLASH 8 advanced for Windows and Macintosh
Publication: Pearson Education
By Chun Robertson
2. Adobe Flash Professional CS6 Classroom in a book
Publication: Pearson (Adobe Press)
3. Adobe Flash CS4 Professional Bible
Publication: Willy India Edition
By Robert Reinhardt, Snow Dowd
4. Online tutorial and E-books for Open source 3D animation software.

AUGUST

FC-302(3) Customer Relationship Management

Course Introduction:

The course would make students to understand the significance of customer relationship management in business. The course will create awareness regarding contemporary uses of eCRM in business.

Objectives:

The student would be able

- 1) To obtain basic understanding of the Customer Relationship Management practiced in industry.
- 2) To understand how customer is important in a business.
- 3) To understand different terms like loyalty management, quality management and eCRM.

No. of Credits: 2

Theory Sessions per week: 3

Teaching Hours: 40 hours

UNIT	TOPICS / SUBTOPICS	TEACHING HOURS
1	Understanding CRM <ul style="list-style-type: none">• Customer relationship management<ul style="list-style-type: none">○ Definition○ Framework○ Scope and evolution○ Core module of CRM○ Technology and CRM○ Levels of CRM• Loyalty management<ul style="list-style-type: none">○ Loyalty management○ Loyalty Programmes<ul style="list-style-type: none">○ Planning and Managing loyalty programmes○ Types of loyalty programmes○ Reasons of failure of loyalty programmes	10 hours

	<ul style="list-style-type: none"> • Service quality and service capacity planning <ul style="list-style-type: none"> ○ Service quality and CRM ○ Concept of service capacity ○ Service capacity planning process ○ Using queuing theory for service capacity planning ○ Analysis of a queue system 	
2	Customer-driven quality and quality management system	
	<ul style="list-style-type: none"> • Customer-driven quality and QMS <ul style="list-style-type: none"> ○ Quality and its relevance to CRM ○ Understanding customer-driven quality ○ Quality management ○ Quality policy ○ Quality objectives ○ Quality management system ○ Quality management system standard ○ Quality management principles ○ Quality system documentation ○ Implementation of quality management systems 	
	<ul style="list-style-type: none"> • CRM and sales force automation <ul style="list-style-type: none"> ○ Sales force automation ○ Objectives of SFA ○ Features of SFA ○ Strategic advantages of SFA ○ Key factors for successful SFA 	
3	eCRM, Planning and implement ting CRM	
	<ul style="list-style-type: none"> • eCRM <ul style="list-style-type: none"> ○ What is eCRM? ○ Benefits of eCRM ○ Data handling in eCRM ○ ECRM system/application in market ○ Specification of eCRM solutions 	
	<ul style="list-style-type: none"> • Planning and implement ting CRM <ul style="list-style-type: none"> ○ Scope and significance of a CRM project ○ Business process reengineering for CRM implementation ○ CRM implementation process 	
4	Making CRM a success, IT solution of CRM and its integration, future of CRM	

	<p>Making CRM a success ○ Success factor for CRM</p> <ul style="list-style-type: none"> ○ Business process reengineering for CRM implementation ○ Data quality management ○ Securing customer data: information security management system ○ Ethical issue in CRM 	
	<ul style="list-style-type: none"> • IT solution of CRM and its integration ○ The eCRM project implementation road map ○ Integrating CRM ○ Integrating CRM and SCM 	
	<ul style="list-style-type: none"> ○ Integrating CRM and SRM ○ ERM • Future of CRM ○ Emerging technologies and CRM 	

Textbook:

CRM:Customer Relationship Management

Publisher: McGraw Hill

By Urvashi Makkar, Harinder Kumar Makkar

Reference Books:

1. Customer Relationship Management Concepts & Application

Publisher: Dreamtech Press

By Alok Kumar, Chhabi Sinha, Rakesh Sharma

2. Customer Relationship Management Publisher: Dreamtech Press

By Dr. Jaspreet Kaur Bhasin

3. Customer Relationship Management Getting It Right!

Publisher: Pearson

By Judith W. Kincaid

SEPTEMBER

SEC-302(1) Mobile Application Development

Course Introduction:

This course will introduce students to mobile computing and mobile application development. It discusses overview of mobile computing, technologies and wireless communication. Students will be expected to learn basics of Android Framework.

Objectives:

The student would be able

- 1) To understand how mobile network works.
- 2) To understand the process of developing software for the mobile device. 3)
To create simple mobile applications on the Android Platform.

No. of Credits: 3

Theory Sessions per week: 3

Teaching Hours: 40 hours

UNIT	TOPICS / SUBTOPICS	TEACHING HOURS
1	Introduction	10 hours
	<ul style="list-style-type: none">• Introduction to Mobile Computing and Wireless Networking<ul style="list-style-type: none">○ What is Mobile Computing?○ Mobile Computing vs. Wireless Networking○ Mobile Computing Applications○ Characteristics of Mobile Computing○ Structure of Mobile Computing Application○ Cellular Mobile Communication○ GSM○ GPRS○ UMTS	
	<ul style="list-style-type: none">• MAC Protocols<ul style="list-style-type: none">○ Properties of MAC Protocols○ Wireless MAC Protocols	

	<ul style="list-style-type: none"> ○ A Taxonomy of MAC Protocols ○ Fixed Assignment Schemes ○ Random Assignment Schemes 	
2	Mobile Internet Protocol, Mobile Transport Layer and Mobile Database	
	<ul style="list-style-type: none"> • Mobile Internet Protocol <ul style="list-style-type: none"> ○ Mobile IP ○ Overview of Mobile IP ○ Packet Delivery ○ Desirable Features of Mobile IP 	
	<ul style="list-style-type: none"> ○ Key Mechanism in Mobile IP 	
	<ul style="list-style-type: none"> • Mobile Transport Layer <ul style="list-style-type: none"> ○ Overview of TCP/IP ○ Terminologies of TCP/IP ○ Improvements in TCP Performance 	
	<ul style="list-style-type: none"> • Operating System for Mobile Computing <ul style="list-style-type: none"> ○ Operating System Responsibilities in Mobile Device ○ Mobile OS – A Few Basic Concepts ○ Special Constraints and Requirements of Mobile OS ○ A Survey of Commercial Mobile OS ○ A Comparative Study of Mobile OSs. 	
3	Introduction to Android	
	<ul style="list-style-type: none"> • Getting Started with Android <ul style="list-style-type: none"> ○ Android SDK ○ Creating an Emulator ○ Creating a New Android Project 	
	<ul style="list-style-type: none"> • Exploring the Application Basics <ul style="list-style-type: none"> ○ The Files ○ The Manifest ○ The Activity Class ○ Watching the Activity in Action ○ Implementing your own Activity ○ The Intent Class 	

	<ul style="list-style-type: none"> ○ Manifest Registration ○ Adding an Intent ○ Listening for Intents at Runtime ○ Moving your Own Data ○ The Application Class ○ The Default Application Declaration ○ Customizing your own Application ○ Accessing the Application 	
4	User Interfaces	
	<ul style="list-style-type: none"> • Creating User Interface <ul style="list-style-type: none"> ○ The View Class ○ Creating a View ○ Altering the UI at Runtime ○ Crating custom Views ○ Resource Management ○ Resource Folder Overview ○ Values Folder ○ Layout Folders ○ Drawable Folders 	
	<ul style="list-style-type: none"> ○ Layout Management ○ The ViewGroup ○ The AbsoluteLayout ○ The LinearLayout ○ The RelativeLayout 	

Textbooks:

1. Fundamentals of Mobile Computing
Publisher: PHI

By Prasant Kumar Pattnaik and Rajib Mall

2. Creating Android Applications Develop and Design

Publisher: Pearson
By Chris Haseman

Reference Book:

Beginning Android 4 Application Development
Publisher: Wiley By Wei-Meng Lee

OCTOBER

SEC-302(2) Website Frameworks (Joomla, Ruby on Rails)

Course Introduction:

This course enables the students to build web sites and powerful online applications using Joomla. It provides students with the opportunity to set up a Joomla community web site in the real world. Ruby on Rails (RoR) course provides the knowledge necessary to design and develop dynamic web pages using Ruby. This course introduces briefly the most important features of Ruby and some of the essentials of Rails.

Objectives:

The student would be able

- 1) To create different types of online applications.
- 2) To create online magazines, newspapers, and publications.
- 3) To configure Joomla templates and populate the site with content and extensions.
- 4) To learn the basics of the Ruby language.
- 5) To understand fundamentals of Rails.

No. of credits: 3

Theory sessions per week: 3 **Teaching**

Hours: 40 hours

UNIT	TOPICS / SUBTOPICS	TEACHING HOURS
1	Introduction to Joomla, sections, articles, categories in Joomla	10 Hours
	Understanding Joomla!	
	<ul style="list-style-type: none">• What is Joomla?• Comparing static websites and content management system Choosing the right solution	
	Planning your website	
	<ul style="list-style-type: none">• Determining the goal of an organization or project• How will the website help to achieve the goal?• Who will visit the website?• What do the website visitors want? Identifying and organizing the website's information	

	<ul style="list-style-type: none"> Identifying important functionality 	
A tour of the Joomla! Administrator interface		
	<ul style="list-style-type: none"> Logging in Joomla!'s Menus <ul style="list-style-type: none"> Site menu Menus <ul style="list-style-type: none"> Content Components Extensions Tools Help 	
	<ul style="list-style-type: none"> Common Interface buttons <ul style="list-style-type: none"> New Edit Publish and Unpublish 	
Defining section and category structure		
	<ul style="list-style-type: none"> Making sections and categories useful Assigning sections and categories to your site map 	
Creating, editing and deleting sections		
	<ul style="list-style-type: none"> Creating sections Editing sections Deleting sections 	
Creating, editing and deleting categories		
	<ul style="list-style-type: none"> Creating categories Editing categories Category parameters Deleting categories 	
Creating, editing and deleting articles		
	<ul style="list-style-type: none"> Creating articles Editing articles Deleting and restoring articles Filtering articles 	
Adding articles to the home page		

	<ul style="list-style-type: none"> • Toggling the front page state of an article • Working the front page manager • Into text vs. full article text 	
	Using advanced article options	
	<ul style="list-style-type: none"> • Adjusting TinyMCE settings • Paste from world • Creating links to other pages on the website • Creating a link to another website • Setting a start and finish publishing date • Setting a different author name • Accessing the article manager options 	
	Including media in articles	
	<ul style="list-style-type: none"> • Joomla!’s Media manager • Inserting images into articles • Including video from youtube in your article 	
	Joomla Menus, Templates and Modules	
2	Linking articles to the menu	
	<ul style="list-style-type: none"> • Linking an individual article to the menu • Creating a category blog 	
	<ul style="list-style-type: none"> • Creating article lists from a category 	
	NOVEMBER	
	Using advanced menu options: articles	
	<ul style="list-style-type: none"> • Section layout and category list layout <ul style="list-style-type: none"> ○ Parameters (Basic) ○ Parameters (Advanced) • Sections and category blog <ul style="list-style-type: none"> ○ Parameters (Basic) ○ Parameters (Advanced) • Create article • Archived articles 	

Using advanced menu options: creating new menus	
<ul style="list-style-type: none"> • Creating new menu • Moving menu items • Displaying the menu module 	
Using advanced menu options: wrappers and external links	
<ul style="list-style-type: none"> • Wrappers • External links 	
Choosing and installing templates	
<ul style="list-style-type: none"> • Joomla!'s default template <ul style="list-style-type: none"> ○ Template parameters ○ Assigning a template • Which templates are better: free or commercial? • Downloading and installing templates from other sites 	
Configuring Latest News and Newsflash	
<ul style="list-style-type: none"> • Creating and configuring the latest news module • Creating and configuring the newsflash module 	
Configuring Random Images	
<ul style="list-style-type: none"> • Image consideration • Configuring your photos • Creating and editing the random image module • Reordering Modules 	
Configuring search	
<ul style="list-style-type: none"> • Creating and configuring the search module • Specific Search components settings 	
Configuring Contacts	
<ul style="list-style-type: none"> • Creating the contact category • Creating the contact • Menus: Displaying a single contact • Menus: Displaying contacts within a category 	
Configuring Web Links	
<ul style="list-style-type: none"> • Creating categories 	

	<ul style="list-style-type: none"> • Creating links • Menus: Displaying links 	
	Extending Joomla! and Introduction to Ruby	
3	Adding extensions to Joomla!	
	<ul style="list-style-type: none"> • Introducing the Joomla! Extension directory • Choosing a good extension • Paid vs. Free: which is better? 	
	Changing the editor in Joomla! To JCE	
	<ul style="list-style-type: none"> • Downloading JCE 	

DECEMBER

REVISIONS AND PRACTICAL EXAMS