GUJARAT TECHNOLOGICAL UNIVERSITY, AHMEDABAD, GUJARAT

COURSE CURRICULUM
Course Title: INTERNET TECHNOLOGY
(Code: 3341604)

Diploma Programmes in which this course is offered	Semester in which offered
Information Technology	**4th Sem**

1. RATIONALE

Internet technology is widely used technology for development of applications in industry and commerce. This course provides students knowledge of different internet technologies likes, HTML language, Cascading Style Sheets, VB Scripting, Active Server Pages 3.0 and Activex Data Object. This helps students to create ASP-based Websites. This course is also pre requisite of the ASP.NET technology, which students will learn in the next semester.

2. COMPETENCY

The course content should be taught and implemented with the aim to develop different types of skills so that students are able to acquire following competency:

- Develop commercial and real life web based application.

3. Course Outcomes:

1. Understand the terminologies of Internet Technology.
2. Design client side interactive webpage using basic concepts of the HTML and CSS.
3. Understand concepts of Active Server Pages.
4. Write server side scripting and logic using VB Script.
5. Apply methods and properties of various objects and components of ASP in dynamic website.
6. Develop Dynamic real life website using the concept of ADO and ASP.

4. Teaching and Examination Scheme

Teaching Scheme (In Hours)			Total Credits (L+T+P)	Examination Scheme				
				Theory Marks		Practical Marks		Total Marks
L	**T**	**P**	**C**	**ESE**	**PA**	**ESE**	**PA**	
3	0	4	7	70	30	40	60	200

Legends: L-Lecture; **T** – Tutorial/Teacher Guided Theory Practice; **P** - Practical; **C** – Credit
ESE - End Semester Examination; **PA** - Progressive Assessment.

5. COURSE DETAILS

Unit	Major Learning Outcomes	Topics and Sub-topics
Unit – I **Introduction to Internet technology**	1a. Understand Internet technology.	1.1 Introduction to Internet 1.2 History of Internet 1.3 Internet Service Provider 1.4 Domain Name System 1.5 Web Server 1.6 Client/Server Architecture
Unit – II **Basics of HTML**	2a. Create webpage using HTML tags.	2.1 What is HTML 2.2 Syntax – Tags and Attributes 2.3 Formatting Text (List ,Heading Styles, Fonts and Colors, Paragraph, Body Tag) 2.4 Image Tag 2.5 Hyper linking using Anchor Tag 2.6 Formatting Tables 2.7 Frames 2.8 HTML Form 2.8.1 Form Object 2.8.2 Form Elements and its methods, properties and events (Text, Password, Button, Radio Checkbox, Reset and Submit button, Select, Text Area)
	2b. Apply CSS into webpage.	2.9 Introducing CSS 2.10 CSS Types (Inline Style, Embedded Style, Linked Style)
Unit – III **Active Server Pages 3.0**	3a. Understanding concepts of ASP.	3.1 Introduction to ASP 3.2 Benefits of ASP 3.3 Advantages of ASP over HTML 3.4 .asp file 3.5 Using scripting language 3.6 Setting primary scripting language 3.7 Including other files 3.7.1 Using virtual keyword and File keyword 3.7.2 Including Files 3.8 Transferring data using GET and POST methods

Unit	Major Learning Outcomes	Topics and Sub-topics
		3.9 Introduction to IIS
Unit – IV **Server side coding with VBScript and XML**	4a. Using VBScript for server side coding in ASP.	4.1 VBScript Variables 4.2 Subroutines and Functions 4.3 Built-In Functions and Methods 4.4 String Handling functions 4.5 Logical Structures 4.5.1 If..Then, Select CaseBoolean Logic 4.6.1 AND, OR, XOR, NOT 4.7 Looping For..Next, While.Wend, Do. While
	4b. Understanding XML andXSL.	4.9 Introduction to XML 4.8.1 Difference between HTML and XML 4.8.2 Use Of XML 4.9 Introduction to XSL 4.9.1 Use of XSL
Unit – V **ASP Objects and Components**	5a. Describe different objects of ASP.	5.1 ASP Objects 5.2 Response Object 5.2.1 Sending text with response object and embedded quotes 5.2.2 Response. Cookies collection 5.2.3 Response.AddHeader method and Redirect method 5.2.4 Properties of the response object(Expires, Expires absolute) 5.2.5 Methods of the Response object (Clear, Create Object, HTML_ Encode, MapPath,URLEncode)
	5b. Transfer values from one ASP web form to other web form using methods of objects of ASP.	5.3 Request Object Collections 5.3.1 Request. Server Variables 5.3.2 Request. Cookies 5.3.3 Request.QueryString 5.3.4 HTML Forms 5.3.5 Request. Form 5.3.6 Request. Client Certificate

Unit	Major Learning Outcomes	Topics and Sub-topics
	5c. Use methods and properties of application and server objects of ASP.	5.4Application and Server Objects 5.4.1 Application variables 5.4.2 Application Lock/Unlock methods 5.4.3 Server Objects properties and Methods (Script Timeout, HTML Encode, URL Encode, Create Object, Execute, Include directive, Transfer, MapPath,GetLastError)
	5d. Manage session using session objects properties and methods.	5.5Session Object 5.5.1 SessionID Cookie 5.5.2 global.asa file - session. Timeout Property - session. Abandon Method 5.5.3 Session variables
	5e. Apply Adrotator and Browser capability components in ASP web page.	5.6 Browser Capabilities Component 5.7 Ad Rotator Component
Unit – VI **Accessing databases with ASP and ADO**	6a. Understanding different objects of ADO.	6.1 What is ADO? 6.2 Connection Object 6.2.1 Creating connections with OLEdb and ODbc 6.2.2 Creating System DSN, FileDSN 6.2.3 Opening and Closing connections 6.3 Recordset Object (Cursors, Locks using recordset) 6.4 Disconnected Recordset 6.4 Field Object
	6b. Develop web application using ASP.	6.5 Command Object 6.6 Reading from, writing into and updating database.

6. SUGGESTED SPECIFICATION TABLE WITH HOURS & MARKS (THEORY)

Unit No.	Unit Title	Teaching Hours	Distribution of Theory Marks			
			R Level	U Level	A Level	Total Marks
I	Introduction to Internet technology	2	4	4	0	8
II	Basics of HTML and CSS	6	0	2	6	8
III	Active Server Pages 3.0	6	4	8	0	12
IV	Server side coding with VBScript and XML	8	2	4	8	14
V	ASP Objects and Components	10	4	4	6	14
VI	Accessing databases with ASP and ADO	10	4	4	6	14
	Total	**42**	**18**	**26**	**26**	**70**

Legends: R = Remembrance; U = Understanding; A = Application and above levels (Revised Bloom's taxonomy)

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

7. SUGGESTED LIST OF EXERCISES/PRACTICALS

S. No.	Unit No.	Practical Exercises	Hrs. required
1	I	Study of Internet Technology.	02
2	II	Create webpage using text formatting tags of HTML.	02
3	II	Create webpage using table tags of HTML.	02
4	II	Create webpage using list tags of HTML.	02
5	II	Create webpage to include image using HTML tag.	02
6	II	Create employee registration webpage using HTML form objects.	02
7	II	Apply style sheet in Web page.	02
8	III	Study of ASP.	02
9	IV	Create web page in which XML tags used.	02
10	IV & V	Create web page to display "Welcome to ASP" using VBScript in ASP.	02
11	IV & V	Create web page to generate grade sheet of student using VBScript in ASP.	02
12	IV & V	Create web page to print Fibonacci series using VBScript in ASP.	02
13	IV & V	Create web page to display factorial of a number using VBScript in ASP.	02
14	V	Create web page to demonstrate use of different ASP objects.	02
15	V	Create webpage to Send text with response object and embedded quotes in ASP.	02

16	V	Create webpage to Send text using AddHeader method of Response object in ASP.	02
17	V	Create webpage to Send text using Request method of Response object in ASP.	02
18	V	Create webpage to transfer data using Request. Cookie collection of in ASP.	02
19	V	Create webpage to transfer data using Request.QueryString collection of in ASP.	02
20	V	Create webpage for Student Registration and validate data using Request. Form collection in ASP.	02
21	V	Create webpage to demonstrate use of Browser Capability and AdRotator components in ASP.	02
22	VI	Study of ADO.	02
23	VI	Create webpage to add, update, delete records form database using objects of ADO.	04
24	V & VI	Develop small module of any real life application using ASP and ADO.	08
Total			**56**

8. SUGGESTED LIST OF STUDENT ACTIVITIES

Following is the list of proposed student activities like:

1) Develop programs related with unit vice topics in computer laboratory.
2) Develop any module of to be useful in real life application.
3) Multimedia presentation of module developed by students.

9. SPECIAL INSTRUCTIONAL STRATEGIES (if any)

1) Demonstration using projector and PC
2) Black Board method

10. SUGGESTED LEARNING RESOURCES

A) List of Books

S. No.	Title of Book	Author	Publication
1.	Mastering Active Server Pages 3	A. Russell Jones	BPB Publication
2.	Practical ASP	Ivan Bayross	BPB Publication
3.	Web Enabled commercial application development using HTML, DHTML, JavaScript, Perl, CGI	Ivan Bayross	BPB Publication

B) List of Major Equipment/ Instrument with Broad Specifications

- Computer with higher configuration.
- Multimedia Projector

C) List of Software/Learning Websites

- ASP **Tutorial - W3Schools**
  www.w3schools.com/**asp**/
- **Classic** ASP Tutorials **& Articles - Web Wiz**
  www.webwiz.co.uk › *Knowledgebase*
- HTML Tutorial **- W3Schools**
  www.w3schools.com/**html**/
- CSS Tutorial
  www.**csstutorial**.net/
- VBScript Tutorial **- Tutorials Point**
  www.**tutorials**point.com/**vbscript**/index.htm
- **ADO Tutorial - W3Schools**
  www.w3schools.com/ADO/default.**asp**

11. COURSE CURRICULUM DEVELOPMENT COMMITTEE

Faculty Members from Polytechnics

1. **Mr. Parvez Faruki**, Lecturer in Information Technology, Government Polytechnic, Ahmedabad
2. **Mrs. Rikita D. Parekh**, Lecturer in Information Technology, Government Polytechnic for Girls, Ahmedabad

Coordinator and Faculty Members from NITTTR Bhopal

1. Prof. (Mrs.) Susan S. Mathew
2. Dr. Joshua Earnest,