PESIT Bangalore South Campus
Department of MCA
Course Information for

Advanced Web Programming (13MCA43)

1. GENERAL INFORMATION:

Academic Year: 2015 **Semester:** IV

Title	Code	Duration (hrs)	
Advanced Web Programming	**13MCA43**	**Lectures**	48 Hrs
		Seminars	4 Hrs
		Total	52 Hrs

2. PRE REQUIREMENT STATEMENT:

Student should know the basics of Internet , HTML and some knowledge about OOPs concept.

3. COURSE RELEVANCE:

This course provides the students with a comprehensive introduction to programming tools and skills required to build and maintain server sites on the Web. It also provides background in programming in some language that supports object-oriented programming.

4. LEARNING OUTCOMES:

1. Build web applications
2. Create web forms
3. Validate form data using server-side Validation controls
4. Create dynamic Web applications that interact with a database using server-side programming

5. Introduces PHP, a server-side scripting language as a database access language.
6. Usage of PERL for Common Gateway Interface programming language.

5. FACULTY DETAILS:

Faculty Name : D.Somashekhara Reddy
Department : MCA
Room Number: 518
Phone Number: 8861290291
Mail-id :somashekhara.reddy@gmail.com
Contact Hours : College Hours
Consultation Time: By E-Mail

6. VENUE AND HOURS/WEEK:

All lectures will normally be held in 500,501 and 506, 5th Floor.
Lecture Hours/week: 4Hrs
All the laboratory sessions will be held in Room 500 & 506, V Floor.

7. MODULE MAP:

Class	Theme	Topics to be covered	% of portions covered	
			Chapter Wise	**Cumulative**
1	**Unit 1** **1.Programming in Perl**	Origins and uses of Perl	**7Hrs**	**13%**
2		Scalars and their operations		
3		Assignment statements and simple input and output		
4		Control statements		
5		Fundamentals of arrays		
6		Hashes, References ,Functions		
7		Pattern matching, File input and output; Examples		
8	**Unit 2** **CGI Scripting**	What is CGI?	**6Hrs**	**25%**
9		Developing CGI Applications		
10		Processing CGI, Introduction to CGI.pm, CGI.pm methods,		
11		Creating HTML Pages Dynamically, Using CGI.pm		
12		An Example, Adding Robustness, Carp, Cookies		
13		An Example, Adding Robustness, Carp, Cookies		
14	**Unit 3** **Building Web Applications with Perl**	Uploading files	**5Hrs**	**34%**
15		Tracking users with Hidden Data		
16		Using Relational Databases		
17		Using Relational Databases		
18		using libwww		
19	**Unit 4** **Introduction to PHP**	**Origins and uses of PHP**	**8Hrs**	**50%**
20		Overview of PHP		
21		General syntactic characteristics		
22		Primitives		
23		operations and expressions		
24		Output, Control statements		
25		Functions, Pattern matching		
26		Form handling, Files		

27	**Unit 5** **Building Web applications with PHP**	Tracking users	**6Hrs**	**61%**
28		Cookies		
29		Sessions		
30		Using Databases		
31		Handling XML		
32		Handling XML		
33	**Unit 6** **Introduction to Ruby**	Origins and uses of Ruby	**8Hrs**	**76%**
34		**Scalar types and their operations**		
35		Simple input and output		
36		**Control statements**		
37		Arrays		
38		Hashes, Methods		
39		Classes, Code blocks and iterators		
40		Pattern matching.		

Class	Theme	Topics to be covered	% of portions covered	
			Chapter-Wise	Cumulative
41	**Unit 7** **Introduction to Rails.**	Overview of Rails	**4Hrs**	**84%**
42		Document requests		
43		Processing forms		
44		Rails applications with Databases, Layouts.		
45	**Unit 8** **Introduction web 2.0,**	What is Web 2.0?	**4Hrs**	**92%**
46		Folksonomies and Web 2.0		
47		Software As a Service (SaaS), Data and Web 2.0, Convergence, Iterative development,		
48		Rich User experience, Multiple Delivery Channels, Social Networking.		
45	**Unit 9** **Web Services**	Web Services: SOAP, RPC Style SOAP	**4Hrs**	**100%**
46		Document style SOAP, WSDL, REST services, JSON format		
47		What is JSON?, Array literals, Object literals, Mixing literals, JSON 0053yntax		
48		JSON Encoding and Decoding, JSON versus XML		

8. RECOMMENDED BOOKS/JOURNALS/WEBSITES

Text Books:

1. Chris Bates: Web Programming Building Internet Applications, 3rd Edn, Wiley India,

2006 (Chapter 10,11,13)

2. Robert W. Sebesta: Programming the World Wide Web, 4th Edition, Pearson Education, 2008. (Chapters 8,11,13, 14, 15)

3. Francis Shanahan: Mashups, Wiley India 2007(Chapters 1, 6)

Reference Books:

1. M. Deitel, P.J. Deitel, A. B. Goldberg: Internet & World Wide Web How to H program, 3rdEdition, Pearson Education / PHI, 2004.

2. Xue Bai et al: The Web Warrior Guide to Web Programming, Thomson, 2003.

3. Joel Murach’s PHP and MySQL. Mauch’s Publications, First Edition.

9 ASSIGNMENTS-

The students has to submit 2 assignments, one before first internal and the second one before second internal exam

Assignment -1

(a) Write an HTML page to create the following lists:

- Pentium I
- Pentium II
    1. 1.6 GHz
    2. 2.4 GHz
    3. 3.2 GHz
- Pentium III

(b) Write an HTML page to display the following

First Name: ☐

Middle Name: ☐

Last Name: ☐

Assignment - 2

(a) Create a form having number of elements (Textboxes, Radio buttons, Checkboxes, and so on).Write JavaScript code to count the number of elements in a form.

(b) Create a HTML form that has number of Textboxes. When the form runs in the browser fill the textboxes with data. Write JavaScript code that verifies that all textboxes has been filled. If a Textbox has been left empty, popup an alert indicating which textbox has been left empty.

10 THEORY ASSESSMENT

- WRITTEN EXAMINATION

Paper Structure			
No. Of Questions	8 Main Questions	**No. of questions to be answered**	5
Exam date		**Paper Duration**	3 Hrs
Total Marks	100	**Pass Marks**	40

CONTINUOUS ASSESSMENT

Parameters	Weighting (%)
Assignment(s):	5 Marks (10%)
Seminar(s):	5 Marks (10%)
Test(s):	40 Marks (80%)
Total Marks:	50 Marks

11 QUESTION BANK

1) iframe in HTML is used to display a web page within a web page
   -True
   -False
2) An HTML file written in notepad can be saved with an extension:
   -.htm
   -.html
   -Any of the above
   -None of the above.

3) The href attribute in the link tag specifies the:
   -Destination of a link.
   -Link.
   -Hypertext
   -None of the above

4) HTML Event Attributes onunload fires
   -when the browser window has been closed
   -when the browser window is minimized
   -when the browser window has changed focus to other window.
   -After the page is finished loading

5) What is cell padding?
   -Used to separate cell walls from their contents.
   -Used to set space between cells
   -Both a and b above
   -Used to provide width to a cell

6) What are meta tags used for?
   -To store information usually relevant to browsers and search engines.
   -To only store information usually relevant to browsers
   -To only store information about search engines.
   -To store information about external links

7) What is the difference between XML and HTML?
  - -HTML is used for exchanging data, XML is not.
  - -XML is used for exchanging data, HTML is not.
  - -HTML can have user defined tags, XML cannot

8) DOM stands for
  - -Document object model
  - -Data object model
  - -Document Oriented model
  - -Data oriented model

9) Which HTML attribute is used to define inline styles?
  - -font
  - -class
  - -styles
  - -style

10) Which is the correct CSS syntax?
  - -body:color=black
  - -{body;color:black}
  - -{body:color=black(body}
  - -body {color: black}

11) What is the difference between Client side JavaScript and Server side JavaScript.

12) What is the difference between a web-garden and a web-farm?

13) .How to Access Elements using javascript?

14) Methods GET vs. POST in HTML forms.

15) What are windows object and navigator object in JavaScript?

16) How to set a HTML document's background color in JavaScript?

17) Is a javascript script faster than an ASP script?

18) What does isNaN function do?

19) How do you create a new object in JavaScript?

20) What boolean operators does JavaScript support?

21) What is negative infinity?

22) What is the difference between undefined value and null value?

23) What is the difference between “==” and “===”?

24) Differentiate between “var a=2” and “a =2”

25) What is Javascript namespacing? How and where is it used?

26) Are javascript and jQuery different?

27) What is event bubbling?

28) Difference between window.onload and onDocumentReady?

29) How do you change the style/class on any element?

30) How to get value from dropdown (select) control?

31) List the rules to be followed by an XML document.

32) Define DTD (Document Type definition).

33) What is a CDATA section in XML?

34) What is XSL?

35) What is XMLA ?

36) What is XML Namespace?

37) What is XML data binding?

38) What is XML Serialization and Binary Serialization?

39) What is the purpose of FOR XML in SQL Server?

40) What is the difference between SAX parser and DOM parser?

41) Which of these is a difference between C++ and Perl?

42) How to open and read data files with Perl

43) How do you generate a list of all .html files in a directory?

44) What happens when you return a reference to a private variable?

46) How to turn on Perl warnings? Why is that important?

47) What are scalar data and scalar variables?

48) What is the output of the following Perl program?

```
 1$p1="prog1.java";
 2$p1=~s/(.*)\.java/$1.cpp/;
3 print "$p1\n";
```

49) How do I do < fill-in-the-blank > for each element in a hash?