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| **1703CS037** | |  | **WEB TECHNOLOGY (Open Elective)** | | **L** | | **T** | | **P** | **C** |
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| **Prerequisite :** | | |  | | | | | | | |
|  | | 1. Basic knowledge in HTML tags & skill of creating web pages should be known . | | | | | | | | |
|  | | 2. Fundamentals of Programming and Networking & Knowledge of basic Computer hardware and software is also necessary. | | | | | | | | |
| **Course Objectives :** | | |  | | | | | | | |
|  | | 1. To impart the new concepts in Web Technologies | | | | | | | | |
| 1. To develop understanding about the different technologies used in the World Wide Web including XML, Perl, Rails and PHP | | | | | | | | |
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| **Unit I** | **Introduction** | | | | | | | **9 Hours** | | |
| XHTML Evolution of HTML and XHTML- Standard XHTML Document Structure- Basic Text Markup- Images-Hypertext Links-Lists- Tables- Forms- Frames. Cascading Style Sheets Introduction to CSS – Levels of Style Sheets- Style Specification Formats- Selector Forms- Property Value Forms – Font Properties- List Properties – Color- Alignment of Text – Background Images- Span and Div Tags. | | | | | | | | | | |
| **Unit II** | **XML** | | | | | | | **9 Hours** | | |
| Introduction to SGML – features of XML - XML as a subset of SGML – XML Vs HTML – Views of an XML document - Syntax of XML- XML Document Structure – Namespaces- XML Schemas- simple XML documents – Different forms of markup that can occur in XML documents - Document Type declarations – Creating XML DTDs – Displaying XML Data in HTML browser – Converting XML to HTML with XSL minimalist XSL style sheets – XML applications | | | | | | | | | | |
| **Unit III** | **PERL** | | | | | | | **9 Hours** | | |
| Origin and Use of Perl- Scalars and their Operations – Assignment Statements and Simple Input and Output – Control Statements- Fundamentals of Arrays – Hashes References- Functions- Pattern Matching – File Input and Output – Simple programs in Perl -Using Perl for CGI Programming. | | | | | | | | | | |
| **Unit IV** | **PHP & MySQL** | | | | | | | **9 Hours** | | |
| Origin and Use of PHP- Overview of PHP- General Syntactic Characteristics Operations and Expressions- Control Statements- Arrays- Functions-Pattern Matching- Form Handling- Files-Cookies-Session Tracking - Database Connectivity, Simple programs in PHP and MySQL. | | | | | | | | | | |
| **Unit V** | **RAILS & AJAX** | | | | | | | **9 Hours** | | |
| RAILS - Overview of Rails- Document Requests- Processing Forms- Rails Application with Databases – Layouts  AJAX - Ajax Overview of Ajax – Basics of Ajax – Rails with Ajax. | | | | | | | | | | |
|  | | | | **Total:** | | **45 + 15 Hours** | | | | |
| **Further Reading:** | | |  | | | | | | | |
|  | 1. Robert W Sebesta, Programming with World Wide Web , 4th ed., Pearson Education ,New Delhi, 2009 | | | | | | | | | |
| 1. Deitel & Deitel Internet & World Wide Web How To Program 4th ed., Pearson International Edition Education ,New Delhi, 2009 | | | | | | | | | |
| **Course Outcomes:** | | |  | | | | | | | |
|  | After completion of the course, Students will be able to | | | | | | | | | |
| 1. Develop web pages using basic HTML | | | | | | | | | |
| 1. Apply XML techniques in web design | | | | | | | | | |
| 1. Implement CGI using Perl | | | | | | | | | |
| 1. Implement PHP & MySQL database connectivity for real world applications | | | | | | | | | |
| 1. Use AJAX with Rails. | | | | | | | | | |
| **References:** | | |  | | | | | | | |
| 1. Deitel & Deitel, Nieto, Lin, Sadhu, XML How to Program, Pearson Education ,New Delhi, 2011 | | | | | | | | | | |
| 1. Kogent Learning Solutions Inc, Web Technologies Black Book, Dreamtech Press, New Delhi, 2009 | | | | | | | | | | |
| 1. Chris Bates, Web Programming Building Internet Applications 3rd ed., Wiley India Edition, New Delhi, 2009 | | | | | | | | | | |
| 1. Phil Ballard, Michael Moncur, Sams Teach Yourself Ajax, JavaScript and PHP, Pearson Education ,New Delhi, 2009. | | | | | | | | | | |
| 1. Achyut S Godbole , Atul Kahate, Web Technologies TCP/IP Architecture and Java Programming, 2nd ed., Tata McGraw Hill Education Private Limited, New Delhi, 2010 | | | | | | | | | | |
| 1. Pankaj Sharma, Introduction to Web Technology, Katson Books, New Delhi, 2008 | | | | | | | | | | |
| 1. Bankim Patel, Lal Bihari Barik, Introduction to Web Technology & Internet, Acme Learning Private Limited, New Delhi, 2009 | | | | | | | | | | |
| NPTEL Link   1. <https://nptel.ac.in/courses/106/105/106105084/> 2. <http://www.nptelvideos.com/php/php_video_tutorials.php> 3. <https://nptel.ac.in/courses/117/106/117106113/> | | | | | | | | | | |