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| **Course Title** | **Advanced Internet Programming** | | | | | | | |
| **Module Title** | **Internet and Web-Technology** | | | | | | | |
| **Module Code** | **INSY-M3081** | | Course Code: **INSY3082** | | | | | |
| **CP/ECTS** | **5** | | | | | | | |
| **Study Hours** | Lecture:**32** | Laboratory:**32** | | | Tutorial: 0 | | Home Study :**71** | |
| **Instructor’s Information** | Name: | | | | | | | |
| Office Phone: Email: sefitarik@gmail.com | | | | | | | |
| Office Location: | | | | | | | |
| Consultation Hours: | | | | | | | |
| **Course Information** | Academic Year: 2020 | | | | | | | |
| Semester: Second | | | | | | | |
| Course Schedule: | | | | | | | |
| Class Room: | | | | | | | |
| Prerequisite(s): **Introduction to Internet Programming** | | | | | | | |
| Mode of Delivery: **Parallel** | | | | | | | |
| **Course Description** | This course is a continuation of Introduction to Internet programming. It focuses on server side issues and the construction of medium- to large-scale web-based business-to-consumer (B2C) and business-to-business (B2B) applications using Java Enterprise Technology. In this course, application servers, integration of data from multiple sources, transactions, and delivery of resultant data as XML or WAP to multiple client mechanisms are dealt with. Topics include Java Server Pages (JSP), Servlets, Java Data Base Connectivity (JDBC), Java Naming and Directory Interface (JNDI) and Enterprise Java Beans (EJB). Consideration is also given to dealing with legacy systems. RMI and CORBA are discussed. | | | | | | | |
| **Learning Outcomes** | * Provide students with an understanding of the use of Cascading Style Sheets. * Introduce students to the JavaScript programming language. * Using the Document Object Model (DOM), the primary data structures underlying web pages. * Enhance student ability to create evocative web pages by showing how to create dynamic documents using JavaScript to access and manipulate the DOM. * Introduce Extensible Markup Language (XML) and provide students with an understanding of its use as a markup language creator for creating human readable, easily sharable data files. * Provide students with an understanding of the use of Flash to create custom graphics for web pages and other forms of media. * Enhance students in understanding of the Java language through their creation of Java Applets for use on web pages. * Introduce students to programming in the PHP language and reveal its ease of use in the web environment. * Provide students with an understanding of the Ajax technology for building programs requiring asynchronous web communication. * Enhance student understanding of the Java language by using Java and the Net beans environment to facilitate web program development. * Provide students with a current state of the art overview of the field of web development and enough hands-on practice with currently used tools to allow students to begin earning money in the field after successful integration of the course material. | | | | | | | |
| **Course Content** | | | | | | | | |
| **Topic** | | | | **Duration(Week)** | | | | **Reading list** |
| **Chapter 1:Server Side Scripting Basic**   * 1. Introduction to server-side scripting   2. Server-side scripting languages   3. Use Basic Syntax   4. Send Data to the Web Browser   5. Write Comments   6. Utilize Variables   7. Manipulate Strings   8. Manipulate Numbers   9. Work with constants | | | | **1-4** | | | |  |
| **Chapter 3: HTML Forms and Server Side Scripting**   * 1. Use Conditionals and Operators   2. Validate Form Data   3. Send Values to a Script Manually   4. Work with Forms and arrays of data   5. Use For and While Loops   6. Create a Simple Form using PHP   7. Receive Data from a Form in PHP   8. Introduction to regular expressions | | | | **Week 5-7** | | | |  |
| **Chapter 4:Files and Directories**   * 1. Write to Files   2. Read from Files   3. Create Directories   4. Upload Files   5. Rename and Delete Files and Directories | | | | **8 -9** | | | |  |
| **Chapter 5: Connecting to Databases**   * 1. Connect to an existing Database   2. Send Data to a Database   3. Retrieve Data from a Database   4. Modify Existing Data   5. Remove Existing Data   6. Data base security using server side scripting | | | | **10-11** | | | |  |
| **Chapter 6:Cookies and Sessions**   * 1. Describe the stateless model   2. Explain the concepts of maintaining state with sessions   3. Create and Read data from sessions   4. Putting PHP session IDs in pages   5. Create and Read data from Cookies   6. Destroy a session   7. Maintain session data using Cookies   8. Add Parameters to a Cookie   9. Delete a Cookie | | | | **12-14** | | | |  |
| **Chapter 7: Content Management Systems (CMS)** | | | | **15** | | | |  |
| **Teaching Strategy** | The course will be delivered in the form of lectures, demonstration, student presentations, group discussions, and individual and group project works. | | | | | | | |
| **Assessment Criteria** | The evaluation shall be based on both formative and summative assessment which include: | | | | | | | |
| **Assessment Forms** | | | | | **% of credit allotted** | | |
| **Lecture (100%)** | | | | | | | |
| * Participation and Attendance * Quizzes and Assignments * Test * Final examination | | | | | 10  25  25  40 | | |
| **Practice (100%)** | | | | | | | |
| * Participation and Attendance * Lab Assignments * Lab Exam * Project | | | | | 10  20  40  30 | | |
| **Role of Instructor(s)** | Delivers lectures, prepares reading assignments and topics for group discussion, prepares projects by discussion with student, gives consultation and advises students on project works and assignments, prepares and evaluates quiz, assignment, midterm and final examination. | | | | | | | |
| **Role of Students** | Attend lectures, lab session and presentation, work in team on group work, participate in group discussion, discusses with the instructor on topics of interest for project work, delivers and presents project work, attend quiz, midterm and final examination. | | | | | | | |
| **Required software and/or hardware** |  | | | | | | | |
| **Reference** | ***Texts:***   1. Craig D. Knuckles, David S. Yuen, Web Applications: Concepts & Real World Design,  John Wiley & Sons, ISBN 0-471-20458-7 (paperback) or 0-471-42929-5. 2. Harvey & Paul, Internet & World Wide Web: How to Program (4th Edition) (How to Program (Deitel)), Deitel & Associates Inc. , 2007.   ***References:***   1. Thomas A. Powell, HTML & XHTML: The Complete Reference , McGraw-Hill 2. Neil Gray, Web Server Programming (John Wiely & Sons) 3. Rasmus Lerdorf, Peter MacIntyre, Kevin Tatroe, Programming PHP (2nd Ed.) (O'Reilly) 4. Goodman, Java script bible (3rd Edition), (Gage Publishing) 5. Gundavaram, S. CGI Programming on the World Wide Web, (O'Reilly and Associates Publishing) 6. Horton, William, The Web Page Design Cookbook. (John Wiley & Sons)   Ajay Vohra, Deepak Vohra, Pro XML Development with Java Technology (Apress) | | | | | | | |