**UNIVERSITY OF THE CORDILLERAS**

**College of Information Technology and Computer Science**

**Course Syllabus in ITE3– Web Application Development**

1. **Course Code:** ITE3-Web Application Development

2 units lecture, 1 unit laboratory

Lecture: 2 times a week – 2 hours and 30 minutes x 14 weeks

Laboratory: 3 times a week – 3 hours and 45 minutes x 14 weeks

1. **Course Description:**

This course will provide a basic understanding of the methods and techniques of developing a simple to moderately complex web site. Using the current standard web page language, students will be instructed on creating and maintaining a simple web site. After the foundation language has been established, the aid of a web editor will be introduced. A second web-based language will be included to further enhance the web sites.

1. **Prerequisites:**

ICS 1, ICS 2

1. **Course Outcomes:**

|  |  |  |
| --- | --- | --- |
| **ATTRIBUTES OF GRADUATES OF UC-CITCS** | | |
| **Attributes** | **Code** | **Description** |
| Analytical Skills | AG1 | Use of ITE knowledge and skills to describe, conceptualize and solve problems based on available data. |
| Flexible | AG2 | Ability to adapt and respond to changes brought by modifications on requirements, available resources and circumstances. |
| Innovative | AG3 | Competence in introducing new ideas through original and creative ways. |
| Team Work | AG4 | Ability to work productively as a member of a team; manifestation of leadership skills. |
| Ethical Behavior & Practices | AG5 | Acting in ways consistent with the norms of society, industries and individuals. |

|  |  |  |  |
| --- | --- | --- | --- |
| **PROGRAM EDUCATIONAL OUTCOMES/OBJECTIVES** | | | |
| **Graduate Attribute** | **Graduate Outcomes Code** | **Graduate Outcomes** | **Attributes of Graduates of UC-CITCS** |
| Knowledge for Solving Computing Problems | IT1 | Apply knowledge of computing, science, and mathematics appropriate to the discipline. | AG1 |
| IT2 | Understanding best practices and standards and their applications. | AG1 |
| Problem Analysis | IT3 | Analyze complex problems, and identify and define the computing requirements appropriate to its solution. | AG1, AG2 |
| IT4 | Identify and analyze user needs and take them into account in the selection, creation, evaluation, and administration of computer-based systems. | AG1, AG2, AG3 |
| Design/Development of Solutions | IT5 | Design, implement, and evaluate computer-based systems, processes, components, or programs to meet desired needs and requirements under various constraints. | AG1, AG2 |
| IT6 | Integrate IT-based solutions into the user environment effectively. | AG1, AG2 |
| Modern Tool Usage | IT7 | Apply knowledge through the use of current techniques, skills, tools, and practices necessary for the IT profession. | AG1, AG2 |
| Individual and Team Work | IT8 | Function effectively as a member or leader of a development team recognizing the different roles within a team to accomplish a common goal. | AG3 |
| IT9 | Assist in the creation of an effective IT project plan. | AG1, AG2, AG3 |
| Communication | IT10 | Communicate effectively with the computing community and with society at large about complex computing activities through logical writing, presentations, and clear instructions. | AG1, AG2, AG3 |
| Computing Professionalism and Social Responsibility | IT11 | Analyze the logical and global impact of computing information technology on individuals, organizations, and society. | AG1, AG2, AG3, AG4 |
| IT12 | Understand professional, ethical, security and social issues, and responsibilities in the utilization of information technology. | AG1, AG4 |
| Life-Long Learning | IT13 | Recognize the need for and engage in planning self-learning and improving performance as a foundation for continuing professional development. | AG3, AG5 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **COURSE LEARNING OUTCOMES** | | | | | | | | | | | | | | |
| **Course Outcomes** | **Course Outcomes Code** | **Program Educational Outcomes** | | | | | | | | | | | | |
| **IT1** | **IT2** | **IT3** | **IT4** | **IT5** | **IT6** | **IT7** | **IT8** | **IT9** | **IT10** | **IT11** | **IT12** | **IT13** |
| Code, document, test, and debug a program and its components. | CO1 | I | I | I | I | I | I | I | I | I | I | I | I | I |
| Design and Develop, and analyze web tools as solutions to problems and as design of a program. | CO2 | I | I | I | I | I | I | I | I | I | I | I | I | I |
| Describe and determine through design and methodology how web sites are planned, designed and delivered. How web pages and web sites are maintained and administered, web hosting requirements and specifications, and web design cost planning and proposal. | CO3 | I | I | I | I | I | I | I |  | I | I |  | I | I |
| **Legend: I – Introduction E – Enabling D - Demonstration** | | | | | | | | | | | | | | |

1. **Bases of Evaluation:**
2. Course requirements that are evaluated based on the rubrics.
3. Prelim, midterm and final major examinations.
4. The standard grading system of the University.

**VI. Grading System:**

1. Prelim Score = 50% Prelim Class Standing + 50% Prelim Exam
2. Midterm Score = 50% Prelim Score + 50% Tentative Midterm Score
   1. Tentative Midterm Score = 50% Midterm Class Standing + 50% Midterm Exam
3. Final Score = 50% Midterm Score + 50% Tentative Final Score
   1. Tentative Final Score = 50% Final Class Standing + 50% Final Exam

**Note:** 1. CS is composed of the course requirements and the required online courses.

2. Scores are transmuted to an equivalent grade where a score of 50% is needed to get a passing grade of 75.

**VII. Course Content:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **TOPICS** | **RESOURCES** | **TIME FRAME (HOURS, WEEK AND GRADING PERIOD)** | **INSTRUCTIONAL MODE** | **ACTIVITIES AND RUBRICS** | **LEARNING OUTCOMES** |
| **An Introduction to Web Design and Development: Environment and Tools**   * The Internet and the World Wide Web * Accessing Information on the Web * Selecting a Service Provider * Web Browsers * Alternative Web Page Viewing Devices * Search Engines/Portals * Impact of the Internet and the Web * Types of Web Sites * Tools for Creating Web Pages * Web Design Roles   **Web Publishing Fundamentals**   * Advantages of Web Publishing * Basic Design Principles * Writing for the Web * Copyrights and Web Text * Color and the Web * Impact of Color * Noteworthy Issues Regarding  Web Development | B1, W1, W4, W5 | **Hours:**  13 hours, 45 Minutes  **Week:**  Weeks 1 to 4 | 1. Lecture – Discussion 2. Recitation 3. Group Activity 4. Online Quiz 5. Audio Visual Presentations | Act.01. CodeCademy:  Learn HTML and CSS  Act.02. HTML: Resume  Act.03. Github Pages  Act.04. Portfolio | C01 |
| PRELIM EXAM 1 hour 25 mins | | | | | |
| **Planning a Successful Website Part 1**   * Web Site Development Process   + Define the Purpose   + Identify the Audience   + Plan the Content   + Plan the Structure * Planning for the 5th Stage   + Home Page   + Splash Page   + Underlying Pages   **Planning a Successful Website Part 2**   * Page Size and Information Placement * Establish A Visual Connection * Color Scheme * Layout   + Grids   + Tables   + Style Sheets * The Web Pages Sample Plan * The Navigation * User-Based Navigation * User-Controlled Navigation * Navigation Elements   **Typography and Graphics**   * Typography * Typography Tips * Selecting Styles and Type * Graphics   + Sources for Graphics   + Graphics File Formats   + Preparing and Optimizing Graphics   + Graphics Tips and Techniques | B1, B2, W1, W2, W3, W4, W5 | **Hours:**  18 hours, 45 minutes  **Week:**  Weeks 5 - 9 | 1. Lecture – Discussion 2. Recitation 3. Group Activity 4. Online Quiz 5. Audio Visual Presentations | Act05. Website Project: Internet Cafe  Act06. Website Project: School Website  Act07. Website Project: Organization Website  \*Github collaboration required for students. | C02  C03 |
| MIDTERM EXAM 1 hour 25 mins | | | | | |
| **Multimedia and Interactivity**   * Multimedia   + Animation   + Downloadable and Streaming Media   + Audio on the Web   + Video on the Web * Interactivity   + Online Forms   + Additional Interactive Page Elements   + Java Applets and JavaScript   **Testing, Publishing, Marketing and Maintaining a Website**   * Website Testing * Website Publishing   + Acquiring Server Space   + Obtaining a Domain Name   + Uploading Your Web Site   + Web Folders * Marketing the Web Site * Maintaining and Updating the Web Site | B1, B2, B3, W1, W2, W3, W4, W5 | **Hours:**  13 hours, 45 minutes  **Week:**  Weeks 10 -14 | 1. Lecture – Discussion 2. Recitation 3. Group Activity 4. Online Quiz 5. Audio Visual Presentations | Act 08. CodeCademy: PHP  Act09. PHP Exercises  Act10. PHP and MySql: SImple Blog  Act11. PHP and MySql: Forum Website  Act 12. Web Publishing  \ | C01  C02  C03 |
| FINAL EXAM 1hour 25 mins | | | | | |

**VIII. References:**

|  |  |  |
| --- | --- | --- |
| **RESOURCE TYPE** | **RESOURCE CODE** | **RESOURCES** |
| Books | B1 | Joel Sklar. Principles of Web Design |
|  | B2 | Web Development and Design Foundations with HTML5 (7th Edition) By Terry Felke-Morris |
|  | B3 | HTML5 & CSS3 Visual QuickStart Guide (7th Edition) by Elizabeth Castro, Bruce Hyslop |
| Websites | W1 | <https://www.codecademy.com/learn/learn-html> |
|  | W2 | <https://www.codecademy.com/learn/learn-css> |
|  | W3 | <https://www.codecademy.com/learn/introduction-to-javascript> |
|  | W4 | <https://github.com> |
|  | W5 | http://w3schools.com |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |

|  |  |  |
| --- | --- | --- |
| Prepared by  Leonard Prim Francis G. Reyes, MIT  Instructor | Evaluated by  Josephine Dela Cruz, DIT  Dept. Head | Approved by  Jeffrey S. Ingosan, MIT  Dean, CITCS |