Course Syllabus

Course Code : ADVWEB1
Course Name : Web Technologies 1
Course Description : This course covers web application development using HTML, CSS, Javascript, Java SE and JavaEE.
Course Credit : Three (3) units
Course Prerequisite : DASTRUC
Course Objectives : Provide the students with the knowledge and skills in developing small- to medium-sized web-based applications using java technologies.
Learning Outcomes
Upon completion of the course, students will:

L1	Install and set up a web server for development and deployment
L2	Develop web applications using web technology with popular development tools
L3	Implement a full Web-based application with database capabilities
L4	Practice best practices when creating and deploying web applications to the server

COURSE OUTLINE

Week	Learning Objectives	Topic Objectives	Module	Module Name	Assessment / Output
1	L1	T1: Know the course outline, class policies and course expectations T2: Recognize the web Technology and identify its purpose T3: Perform actual installation of web server and tools	1 2-3 4-6	Introduction / Course Outline / House Rules Introduction to Web Technology Installing and configuring of the web Server and Tool	 Installation/ Configuring of the web server & tools
2	L2	T1: Review of markup language technologies T2: Demonstrate creation of a new web project	7-9 10 -12	Review of HTML & XML Setting up a Web Project	 Lab Exercises: 1. HTML Page 2. XML Page
3	L2	T1: Review of CSS T2: Apply CSS	13-15 16-18	Review of CSS Apply CSS	Short Quiz Lab Exercises: CSS Layouts
4	L2	T1: Review of Javascript technologies T2: Applying Javascript	19-21	Review of Javascript Applying Javascript	Short Quiz Lab Exercises: JS programs

5	L2	T1: Recognize the Java EE Technology and identify its purpose T2: Describe what JSP technology is T3: Examine the JSP syntax and its expressions	22 23 24-26	Introduction to Java EE technology Introduction to JSP Creating JSP pages	 Lab Exercises: Basic JSP pages
6	L2	T1: Recognize the MVC Framework and identify its purpose T2: Describe and apply JavaBean	27 28-30	Introduction to MVC Framework Intro to JavaBean Applying JavaBean	 Lab Exercises: JavaBean and JSP
7	L2	T1: Describe the JDBC Technology T2: Create a data-driven web application using JDBC and JavaBean	31 32-34	Using JDBC API Use CRUD DB to apply JDBC and JavaBean	 Lab Exercises: JSP Data-Driven Web App
8	L2	T1: Describe what Servlet is T2: Examine the Servlet API	35 36-38	Introduction to Servlet Applying Servlet	 Lab Exercises: Servlet app
9	L2, L4	T3: Creating MVC Web App using JSP, Javabean and Servlet	39-41	Applying JavaBean, JSP and Servlet	Lab Exercises: MVC App
10	L2,L3,L4	T1: Demonstrate a full-pledged, MVC Web App – 1st iteration	42-46	Pre-final Project Presentation	Pre-Final Project Presentation
11	L2, L3	T1: Using other popular Web Technologies	47-51	Using Other popular Web Technologies	Lab Exercises: Using other web technologies
12	L2, L3	T1: Using other popular Web Technologies	52-56	Using Other popular Web Technologies	Lab Exercises: Using other popular web technologies
13	L1,L2,L3, L4	T1: Demonstrate a full-pledged, MVC Web application	57-61	Project Presentation / Defense	Final Project with Final Project Presentation

Textbook / E-book:

Java Platform, Enterprise Edition: The Java EE Tutorial
https://docs.oracle.com/javaee/7/tutorial/

References:

Farrel, J. (2012). *Java Programming Concepts and Applications. 2nd Edition. Philippine Edition.* Cengage Learning.

Lambert, K. & Osborne, M. (2012). *Fundamentals of Java.* Cengage Learning.

Louden, K. & Lambert, K.(2012) *Programming Languages : principles and practice.* Australia. Cengage Learning.

Jendrock, E. (2011). *The Java EE 6 Tutorial: Basic Concepts.* Addison-Wesley.

Deitel, Deitel, (2010). *Java How To Program.* C & E Publishing.

Farrel, J. (2010). *Java Programming 5th Edition.* Course Technology / Cengage Learning.

Sebesta. Robert W. (2010). *Concepts of Programming Languages*. Boston. Addison-Wesley

Cormen et al. (2009). *Introduction to Algorithms* (3d ed.). MIT Press.

Dowek, Gilles. (2009). *Principles of Programming Languages*. London. Springer.

Heineman, Pollice and Selkow. (2009). *Algorithms In a Nutshell.* O'Reilly Media.

Nielsen, F. (2009). *A Concise and Practical Introduction to Programming Algorithms in Java.* Springer-Verlag.

Stepanov, A. (2009). *Elements of Programming.* Addison-Wesley.

Online Resources

Java EE 6 Tutorial
http://docs.oracle.com/javaee/6/tutorial/doc/

Java EE Technical Documentations
http://docs.oracle.com/javaee/

Java EE API Specifications
http://docs.oracle.com/javaee/5/api/

W3SCHOOLS
http://www.w3schools.com/

Instructional Strategies:

Lecture, Recitation, Assignments, Quizzes, Lab Exercises, Written and Practical Exams, Project

Grading System (Midterm Average 40%, Final Average 60%)

Midterm Exam/ Final (Exam)Project	40%
Quizzes/ Class Participation /Recitation	30%
Practical Exercises/Examination	30%
Total	**100%**
Passing Mark	**70%**

Software Requirements:

- Java SDK SE 1.8 or later
- Apache Tomcat v8 or the latest JBoss
- Eclipse with Web plug-in or NetBeans
- Any storyboarding/prototyping tool (like Visio, Pencil, or Lucid Chart)
    - Open-source Pencil app can be downloaded at: http://pencil.evolus.vn/