WEB PROGRAMMING

1.Thông tin về học phần (General Information)

Tên học phần (Course name):   Web Programming

Mã học phần (Course code):   INT1434

Số tín chỉ (Number of credits):   3

Loại học phần (Course type):   Compulsory

Học phần tiên quyết (Prerequisites): Object-Oriented Programming (INT1332)

Học phần song hành (Parallel courses):

Các yêu cầu đối với học phần (Course requirements):

- Lecture room: Projector, microphone and speaker, air conditioner.
- Laboratory: computers, network, internet

Giờ tín chỉ đối với các hoạt động (Teaching and Learning hours):

- Lý thuyết (Lectures):   30h
- Bài tập (Exercises):   0h
- Bài tập lớn (Projects):   9h
- Thực hành (Lab):   6h
- Individual reading: 0h

Địa chỉ Khoa/Bộ môn phụ trách học phần (Address of the Faculty/Department in charge of the course):

- Address: Faculty of Information Technology 1 - Posts and Telecommunications Institute of Technology, Km10, Nguyen Trai Street, Ha Dong District, Hanoi.
- Phone number: (024) 33510432

2. Mục tiêu học phần (Objectives)
Về kiến thức (Knowledge):

The aim of this course is to provide learners with knowledge in web programming, including:

- developing web applications in both client-side and server-side using the languages such as HTML/JavaScript/Java/Servlet/JSP;
- being familiar with Java-based framework such as STRUTS, SPRING.

Kỹ năng (Skills)

The aim of this course is to equip learners with skills in:

- using the popular languages such as HTML, JavaScript, Java/Servlet/JSP to develop a web application.
- developing small/medium web applications or join web application projects with developer's role.

Thái độ, Chuyên cần (Attitude):

Learners are required to attend the classes and complete assignments/projects.

3. Tóm tắt nội dung học phần (Description)

The aim of this course is to provide learners with the knowledge/skills about developing web-based applications, including the client-side (HTML, CSS, JavaScript) as well as server-side (Java Servlet, JSP, JDBC). Students also will be familiar with Java-based frameworks such as STRUTS and SPRING.

4. Nội dung chi tiết học phần (Outlines)

Chapter 1 Web programming outline
1.1. WWW and basic concepts
1.2. Overview of web programming
        1.2.1. Web programming languages
        1.2.2. Web programming support technologies
        1.2.3. Web application deployment
1.3. HTML language
1.4. Client-side programming
1.5. Server-side programming
1.6. In-out in Java review
1.7. Case-study: Student groups propose the selected web application project.
Chapter 2 Client-side programming with HTML/CSS and JavaScript
2.1. Introduction to HTML/CSS
2.2. CSS syntax and how to insert CSS into HTML
2.3. Components of CSS
2.4. JavaScript language
        2.4.1. Variable declaration in JavaScript
        2.4.2. Function and Class in JavaScript
        2.4.3. Objects in JavaScript
2.5. Events in JavaScript
2.6. Form processing in JavaScript
2.7. DOM HTML processing in JavaScript
2.8. Web page designing with Dreamweaver
2.9. Case-study: Student groups create the web interfaces for project using HTML/CSS and JavaScript
Chapter 3 Server-side programming with Servlet/JSP and JDBC
3.1. Introduction to Servlet and JSP
3.2. Basic syntax in JSP
        3.2.1. Basic JSP tags
        3.2.2. include direction
        3.2.3. import direction
        3.2.4. Create and comlile website with Tomcat
3.3. Session and cookies
3.4. JSP custom tags
3.5. JDBC
        3.5.1. JDBC driver and connect to DB
        3.5.2. java.sql library
3.6. MVC application model
3.7. Web application development based on MVC
3.8. Case-study: Student groups develop project functions using JSP/JDBC/MVC
Chapter 4 J2EE web application development framework
4.1. J2EE overview
4.2. Introduction to XML
4.3. J2EE web application development framework overview
4.4. SPRING
        4.4.1. Introduction to SPRING
        4.4.2. Main components of SPRING

4.4.3. Web application development with SPRING

4.4.4. Case-study: Student groups implement the project functions using SPRING

4.5. STRUTS

4.5.1. Introduction to STRUTS

4.5.2. Main components of STRUTS

4.5.3. Web application development with STRUTS

4.5.4. Case-study: Student groups implement the project functions using STRUTS

5. Học liệu (Textbooks)

5.1. Học liệu bắt buộc (Required Textbooks)

[1] H. M. Deitel, P. J. Deitel, T. R. Nieto. *Internet - World Wide Web How To Program*, 5th Edition 2011.

[2] J. Murach, M. Urban. *Murach's Java Servlet and JSP*. 3rd Edition, 2014.

5.2. Học liệu tham khảo (Optional Textbooks)

[1] Nicholas S. Williams. *Professional Java for Web Applications*. Wrox, 1st edition, 2014.

6. Phương pháp, hình thức kiểm tra – đánh giá kết quả học tập học phần (Grading Policy)

Grading method	Percentage	Group/Individual
- Attendance	10%	Individual
- Mid-term test	20%	individual
- Projects	20%	Group or individual
- Final examination	50%	Individual

Trưởng Bộ môn
(Head of Department)

Giảng viên biên soạn
(Lecturer)

Phạm Văn Cường

Dương Trần Đức