Web Programming (2)
Course Definition

Information

Technology

Engineering

Syrian Arab Republic		الجمهورية العربية السورية
Ministry of Higher Education		وزارة التعليم العالــي
Syrian Virtual University		الجامعة الافتراضية السورية

1. Basic Information:

Course Name	Web Programming (2)
Course Code	BWP501
Number of Presentational Sessions*	12*2
Number of Synchronous Sessions**	12
Number of Shorter Tests***	4
Number of Exams***	1
Theoretical Sessions Work Load (hrs.)	72
Practical Sessions Work Load (hrs.)	36
Credit Hours	5

*Each presentational session comprises both recorded lecture (1.5 hrs.) and interactive learning content (1.5 hrs.).

**Each synchronous session comprises the interactive lecture carried out in real time in a virtual class (1.5 hrs.).

***Each shorter test is 0.5 hr. long. The final exam is 2 hrs. long.

N.B.

Generally, each chapter requires two presentational sessions: one for the recorded content and one for the interactive content (unless the chapter is too long, in which case it may require more sessions (. This note applies to synchronous sessions as well, where each chapter requires one synchronous session generally.

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2. Prerequisites courses:

Course	Code
Web Programming (1)	BWP401

3. Course Objectives:

The aim of this course "Web Programming 2", to provide students with the necessary practical skills to build real word web applications.

This course is based on the most common open source language php and its interactions with the MySQL relevant databases.

The course reviews the basics of the php programming language with a focus on the direction of object−oriented programming, the best practices when dealing with databases, the use of appropriate technologies such as JSON and AJAX when needed.

4. Learning Outcomes (LO):

By the end of this course, the learner is expected to acquire and learn the following subjects:

- PHP Basics
- Advanced skills in OOP using PHP.
- Building web forms.
- States Management.
- Data Binding.
- Dealing with databases.
- Database Programming.
- JSON skills.
- AJAX skills.
- Dealing with files.

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5. Assessment Results:

Chapter Number	Chapter Title	General Objectives	Assessment Type				
			Interactive Content & Recorded Sessions	Applied Activities (Synch. Sessions)	Final Exam*/ Shorter Tests**	Presentations and Interviews***	Repo rts****
CH1	PHP Basics	Comprehension –Analytical Thinking –Tools and Application Hands– On	√	√	√	√	√
CH2	Strings, Numbers and Arrays	Comprehension –Analytical Thinking –Tools and Application Hands– On	√	√	√	√	√
CH3	Functions	Comprehension –Analytical Thinking –Tools and Application Hands– On	√	√	√	√	√
CH4	Classes and Objects	Comprehension –Analytical Thinking –Tools and Application Hands– On	√	√	√	√	√
CH5	Forms	Comprehension	√	√	√	√	√

		–Analytical Thinking –Tools and Application Hands– On					
CH6	Dealing with Databases	Comprehension –Analytical Thinking –Tools and Application Hands– On	√	√	√	√	√
CH7	State Management	Comprehension –Analytical Thinking –Tools and Application Hands– On	√	√	√	√	√
CH8	CRUD Forms	Comprehension –Analytical Thinking –Tools and Application Hands– On	√	√	√	√	√
CH9	JSON skills	Comprehension –Analytical Thinking –Tools and Application Hands– On	√	√	√	√	√
CH10	AJAX skills	Comprehension –Analytical	√	√	√	√	√

		Thinking –Tools and Application Hands– On					
CH11	Files	Comprehension –Analytical Thinking –Tools and Application Hands– On	√	√	√	√	√
CH12	Built–in Functions	Comprehension –Analytical Thinking –Tools and Application Hands– On	√	√	√	√	√

*The final exam is two hours long and is given at the end of the course.

**Shorter tests are about 30 minutes long and are given after three or four lectures throughout the semester during synchronous sessions.

***Presentations, interviews, and reports are submitted once after each three or four lectures throughout the semester during synchronous sessions.

6. Course Syllabus:

Chapter	Subject	Content	Number of Learning Objects	Number of synchronous Learning Objects
CH1	PHP Basics	1. PHP Basics 2. Variables and Data types 3. Expressions 4. Conditional statements 5. Loops	5	2
CH2	Strings, Numbers and Arrays	1. Strings 2. Numbers 3. Indexed Arrays 4. Associative Arrays	4	2
CH3	Functions	1. Built−In Functions 2. Functions Declarations 3. Arguments 4. Call by Value 5. Call by Reference	5	2
CH4	Classes and Objects	1. Classes and Objects 2. Inheritance 3. Abstract Classes 4. Traits 5. Static Members	5	2

CH5	Forms	1. Form Requests Handling 2. Form Data Submit 3. Form Input Types 4. Persisting Form Data 5. Form Data Validation	5	2
CH6	Dealing with Databases	1. Accessing Database 2. Create MySQL Database 3. Create Tables 4. Tables Data Manipulation 5. Data Selection	5	2
CH7	State Management	1. Cookies 2. Session Variables	2	1
CH8	CRUD Forms	1. Create 2. Read 3. Update 4. Delete	4	2
CH9	JSON skills	1. Data on the Web 2. What is JSON 3. JSON Syntax 4. PHP and JSON	4	2
CH10	AJAX skills	1. AJAX Intro 2. AJAX PHP 3. AJAX Database 4. AJAX Search	4	2
CH11	Files	1. Open/Read File 2. Create/Write File	3	1

		3. File Upload		
CH12	Built–in Functions	1. Date and Time 2. Math 3. Strings 4. Arrays	4	2

7. Practical Activity:

- **Tools and Labs:**

Tool Name	Description
XAMPP	Free open source
Word, power point, excel	Microsoft office

- **Practical Activities per Chapters:**

Chapter	Activities Type	Remarks
CH1	☑ Exercises ☑ Homework ☐ Webinars ☐ Project ☑ Experiment ☐ Other	XAMPP
CH2	☑ Exercises ☑ Homework ☐ Webinars ☐ Project ☑ Experiment	XAMPP

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	☐ Other	
CH3	☑ Exercises ☑ Homework ☐ Webinars ☑ Project ☑ Experiment ☐ Other	XAMPP
CH4	☑ Exercises ☑ Homework ☐ Webinars ☑ Project ☑ Experiment ☐ Other	XAMPP
CH5	☑ Exercises ☑ Homework ☐ Webinars ☐ Project ☑ Experiment ☐ Other	XAMPP
CH6	☑ Exercises ☑ Homework ☐ Webinars ☐ Project ☑ Experiment ☐ Other	XAMPP
CH7	☑ Exercises	XAMPP

	☑ Homework ☑ Webinars ☐ Project ☑ Experiment ☐ Other	
CH8	☑ Exercises ☑ Homework ☐ Webinars ☑ Project ☑ Experiment ☐ Other	XAMPP
CH9	☑ Exercises ☑ Homework ☐ Webinars ☐ Project ☑ Experiment ☐ Other	XAMPP
CH10	☑ Exercises ☑ Homework ☐ Webinars ☐ Project ☑ Experiment ☐ Other	XAMPP
CH11	☑ Exercises ☑ Homework ☑ Webinars	XAMPP

	☐ Project ☑ Experiment ☐ Other	
CH12	☑ Exercises ☑ Homework ☐ Webinars ☑ Project ☑ Experiment ☐ Other	XAMPP

8. References:

- https://www.w3schools.com/php
- https://www.guru99.com/php-tutorials.html
- https://www.codecademy.com/learn/learn-php