



## Future Academy Higher Future Institute for Specialized Technological Studies

# **Course Specification**

1- Course information:	
Course Code:	CSC312
Course Title:	Systems Programming
Year/level	3 <sup>rd</sup>
Academic Programs	Computer Science Program (B.Sc.)
Contact hours/ week	(Theoretical =2hrs, Practical = 2hrs), Total= 4hrs

# 2- Course aims:

This course aims to provide students with comprehensive knowledge regarding with the design and development of software applications using web programming "Dynamic Web sites and Applications" and a specific Services and APIs. Through this course a lot of topics will be covered such as overview of Web Programming Languages (e.g. HTML5, CSS, JavaScript and PHP) as well as the creation, implementation, and Connecting to MySQLI Database.

# 3- Intended learning outcomes of the course (ILOs):

# a- Knowledge and understanding:

### On successful completion of this course, the student should be able to:

al- **Recognize** the main difference among Static web programming and Dynamic web programming, as well as, Discuss the importance of Dynamic web programming in our daily life.

a2- Gain the knowledge how to setting up and handling Different web servers on your personal computer, such as WAMP, LAMP and XAMP.

a3- **Understand** the basic PhP programming principles such as using comments, variables, constants, variables scope, echo and print command.

a4- Recognize the importance of using control flow statements such as loops and decision statements.

- a5- Understand the importance of building and handling database elements using PhP Language
- a6- **Recognize** the importance of using cookies and sessions.

#### **b- Intellectual skills:**

### On completing this course, the student should be able to:

b1- Analyze the requirements of building Dynamic web sites

b2- Evaluate constructing dynamic web sites using PhP language and MySQLi Database.

#### c- Professional and practical skills:

#### At the end of this course, the student will be able to:

c1- Implement static and websites using HTML5, CSS, JavaScript, PhP and MySQLi Languages

c2- **Design** and **Develop** a wide range of sites using PhP Programming Language.

c3- **Develop** dynamic websites connected to Structured Databases such as MySQLi databases to implement the basic operations of inserting, modifying, searching, sorting, selecting data

d- General and transferable skills:

### On successful completion of this course, the student should be able to:

d1- **Display** personal responsibility by working to multiple deadlines in relation to the course requirements

d2- Demonstrate an integrated approach to the deployment of communication skills

## **4-** Course contents

Topics/units	Number of hours		ILO's
	Lecture Practical		
	hours	hours	
Introduction to Dynamic Web	2	2	a1, c1
Programming	2	2	
Setting Up and handling			a2, b1,
Development Server "WAMP" and	2	2	
"XAMP"			
Introduction to PhP Language			a1, a3, b1, b2, c1, c2
incorporating PHP Within HTML,			
Using Comments, Multiline			
Commands, Basic Syntax,			
Variables, Operators, Variable	4	4	
Assignment and Constants, Form			
handling, as well as , the			
Difference Between the echo and			
print Commands			
Using Expression and Control			a3, a4, b1, b2, c1, c2
Flow Statements such as while			
loop, do-while loop, for loop, if –	2	2	
else statement and switch statement			
in PhP language			

Using Functions, objects and variable Scope in PhP language	2	2	a3, b1, c2
Using numerically indexed array and associative array and handing array function in Php	2	2	a3, b2, c1, c2, d1
Introduction to MySQL database	2	2	a5, b1
Using Data definition Language (DDL) and Data Manipulation Language (DML)	2	2	a5, b1, b2 ,c1, c2, c3, d1
Integrating PhP and MySQLi database	2	2	a4, a5, b1, b2, c1, c2, c3, d2
Using Cookies and Session	2	2	a6, b1, c2, d1

# **5- Teaching and learning methods**

Methods		]											
	a1	a2	a3	a4	a5	a6	b1	b2	c1	c2	c3	d1	d2
Lectures	√	√	√	1	$\checkmark$		1	$\checkmark$		1	1		
Practical sections						√		$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		
Self-learning						$\checkmark$							$\checkmark$
Problem solving							$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$		
Assays and reviews													
Discussion groups												$\checkmark$	
Brainstorming													
Blended-learning													
E-learning	$\checkmark$	$\checkmark$	$\checkmark$										$\checkmark$

# 6- Teaching and learning methods for Low-achieving students

- Additional teaching hours for those who need help.
- More quizzes to assess their ability for understanding the course.
- Encourage the teamwork for those students with other advanced ones to increase their participation and understanding.

# 7-Student assessment

Assessment method	Time	Grade weight (%)	ILOs
Written exam	2 hours	60	a1, a3, a4, a5, a6, b2, c1, c3
Practical exam	2 hours	10	b1, b2, c1
Oral exam			
Mid-term exam	1 hours	10	a3, a4,
Others (Assignments - Project)	Through the semester	20	a3, a4, a5, a6, c1, c2, c3, d1

# 8-List of references

## 8.1. Student notebooks:

Comprehensive instructor notes ("PowerPoint slides") are available on the course web page ") Google Classroom ("

## 8.2. Essential textbooks:

• Learning PHP, MySQL & JavaScript: A Step-by-Step Guide to Creating Dynamic Websites, Robin Nixon, Sixth Edition, ISBN-13: 978-1492093824, 2021

### 8.3. Recommended textbooks:

 Programming PHP: Creating Dynamic Web Pages, Kevin Tatroe, Fourth Edition, ISBN-13: 978-1492054139, 2021

### 8.4. Journals, Periodical and Reports ......etc.

### 8.5. Websites

- <u>https://www.php.net/docs.php</u>
- <u>https://www.w3schools.com/php/</u>
- https://www.geeksforgeeks.org/php-tutorial/

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