



DEPARTMENT OF INFORMATION AND COMMUNICATION TECHNOLOGY

Web Development with PHP and Laravel

YEAR 2023 - Week Day

Instructor	Mr. TOUCH Nguonchhay <i>Email: tnguonchhay@gmail.com</i> <i>Phone: 096 5753913</i>
Location	Lecture: Online / Physical Computer Laboratory: Online
Duration	60 Hours – 12 Weeks
Day/Time	<ul style="list-style-type: none">- Day: Monday and Wednesday- Time: 6:00 PM - 8:30 PM- Hours: 2.5 hours per session

Course Description

PHP, one of the most popular server-side languages, plays a huge role in web development. Because of working well with HTML and supporting a wide range of relational databases, it makes PHP a great language for anyone interested in building dynamic web applications and becomes increasingly fast and powerful over the years. Moreover, there are a lot of cool libraries and fantastic frameworks that were built to support PHP. The most famous PHP framework nowadays is Laravel, which is now the reigning king of dynamic web development tools because of its expressive and elegant syntax. You will become a strong developer who can build dynamic web applications using advanced technology such as PHP and MySQL, Laravel, authentication and authorization, queue system, notification and pushing, RESTful API, security with OAuth 2.0.

Course Objective

The student who completes this course will be able to:

- Explain the basic concepts of web development
- Be able to develop website site and web application
- Apply security techniques to secure web application
- Construct the system design, implementation and testing of medium-sized problem solutions
- Propose solution based on the provided requirement
- Demonstrate methodologies and strategies to solve complex problems

Course Prerequisite

- HTML & CSS
- Basic knowledge of programming
- JavaScript or jQuery or any frontend framework

Software Requirements

- PHP 8.1 or above
- Database server: MySQL or MariaDB
- Apache, Nginx, or Docker
- Visual Studio Code

Course Outline

Week	Chapters	Duration	Remark
1	Course introduction and frontend recap <ul style="list-style-type: none">- General overview of course structure- Overview of frontend libraries and frameworks- Introduction to jQuery	2.5 hours	
	<ul style="list-style-type: none">- Group project selection- Environment set up	2.5 hours	
2	PHP Basic Part I <ul style="list-style-type: none">- General programming structure- PHP basic- Control Statement- Control Structure	5 hours	
3	<ul style="list-style-type: none">- Function and Array	5 hours	Assignment
4	PHP Basic Part II <ul style="list-style-type: none">- Form submission- Cookie and storage- Authentication	5 hours	
5	OOP with PHP <ul style="list-style-type: none">- Class and Object	2.5 hours	

	<ul style="list-style-type: none"> - Inheritance and Polymorphism - Abstract and Interface 		
	PHP practice <ul style="list-style-type: none"> - Apply OOP with PHP in real world project 	2.5 hours	
6	Introduction to Relational Database <ul style="list-style-type: none"> - Explore entity in requirement - Entity Relational Diagram - Basic Structure Query Language (SQL) - MySQL commands 	2.5 hours	
	Quiz 1	2.5 hours	
7	Introduction to Laravel <ul style="list-style-type: none"> - Laravel installation - MVC in Laravel - Request lifecycle 	2.5 hours	
	Layout management <ul style="list-style-type: none"> - Web layout - Customize default layout and structure - Introduction to Blade 	2.5 hours	Assignment
8	Security Part I <ul style="list-style-type: none"> - CSRF protection - Method spoofing - Request validation 	2.5 hours	
	Security Part II <ul style="list-style-type: none"> - Basic authentication - Authorization with middleware, Gate and Policy 	2.5 hours	
9	Laravel practice <ul style="list-style-type: none"> - Apply security into project 	5 hours	
10	RESTful API <ul style="list-style-type: none"> - Develop RESTful API - API resource 	5 hours	Assignment
11	Secure RESTful API	5 hours	
12	Final project presentation	3.5 hours	
	Final Exam	1.5 hours	

Course Requirement

- Students must attend more than 90% of the class.
- Students are required to be evaluated as below:

Discipline and Class participation	10%
Assignments	20%
Midterm	10%
Project	40%
Final Exam	20%
<i>*Students must earn at least 70% of the total score to pass the course.</i>	

Course Discipline

- Students must attend the class more than 80% of the overall class.
- Occasionally, the student can ask for permission from the school administration by completing the absence form at the administration office.

Class Material

The students are optional to have the textbook. Other materials and Computer Laboratory are prepared and provided by the course instructor and school administrations.

Textbook

- Larry, U. (2016). **PHP for the Web, Visual QuickStart Guide**. 5th, Peachpit Press. ISBN-13: 978-0134291253
- Larry, U. (2014). **PHP and MySQL for Dynamic Web Sites: Visual QuickPro Guide**, ISBN-13: 978-0-321-88449-7

Course syllabus is prepared by Instructor:

Full Name: TOUCH Nguonchhay

Date: ____/____/____ (DD/MM/YYYY)

This course syllabus has been authorized by:

Full Name: _____

Date: ____/____/____ (DD/MM/YYYY)