COLLEGE OF COMPUTER STUDIES

COURSE TITLE	**: OPEN SOURCE PROGRAMMING WITH FRAMEWORK**
COURSE DESCRIPTION	**:** This course will guide the student to learn to program using an open-source programming language with framework. It is specifically designed to help them understand the underlying principles on programming web application using the PHP Laravel framework. It aims to take students from the very beginning of an idea into a real deployable application.

COURSE CREDITS	: 3 units
PRE-REQUISITE/S	:
CONTACT HOURS	**:** 5 hours LECTURE & LABORATORY per week
INSTRUCTORS	**:** Menor
CONSULTATION HOURS	:
COURSE LEARNING OUTCOMES :	At the end of the semester, the students are able to:

Cognitive:
1. Apply best practices in web application development.
2. Develop scalable enterprise web applications using the Laravel Framework
3. Implement the MVC design pattern to create maintainable applications.
4. Access various databases in a vendor-independent way
6. Secure your application through proper authentication and authorization

Affective:
1. Appreciate the importance of learning Open Source Programming with Framework in creating and implementing applications.
2. Demonstrate a sense of responsibility in collaborative exercises and group's deliverables.
3. Demonstrate passion and excellence in delivering the course requirements.
4. Develop positive attitude and teamwork in group activities.

LEARNING PLAN

Time Frame	Intended Learning Outcomes	Course Contents	Teaching and Learning Activities	Evidence of Learning/Output (Summative/Formative Assessment/Performance Assessment)	Learning Resources
Week 1	Orient the students on what the subject is and what are expected of them. Orient the students about the school policies/classroom policies and the grading system.	Course Introduction, Objectives and Grading Policy	Class Discussion	Assignment Recitation	1. Online Laravel 11 Documentation (https://laravel.com/docs/11.x 2. https://laravel-news.com/category/tutorials 3. https://www.tutorialspoint.com/articles/index.php
Week 2	Familiarize on the History and features of MVC Identify MVC structure and purpose Understand the MVC Architecture	MVC Framework History & Features of MVC MVC Architecture & Examples Advantages & Disadvantages of MVC Popular MVC Web frameworks	Lecture and discussion of the topics using PowerPoint presentations Readings	Assignment Recitation Seatwork	1. Online Laravel 11 Documentation (https://laravel.com/docs/11.x 2. https://laravel-news.com/category/tutorials 3. https://www.tutorialspoint.com/articles/index.php
Week 3	Understanding of how to configure Laravel.	Introduction to Laravel Concept of Composer	Lecture and discussion of the topics using PowerPoint	Quiz Laboratory Exercises: Laravel Configuration	1. Online Laravel 11 Documentation (https://laravel.com/docs/11.x 2. https://laravel-news.com/category/tutorials

| | | Identify and install Laravel Environment

Understand debugging tools functions | Install and use of Composer

Installing Laravel using composer

Install & use of open source distributed version control system GIT

Configuring Laravel

Project Structure Setting up

Development and Debugging Tools | presentations

Readings | and setup. | 3. https://www.tutorialspoint.com/articles/index.php |
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| Week 4 | | Gives knowledge of how Laravel actually works.

Provides an easy way of accessing application class and libraries. | Laravel Architectural Concepts:

Request Life cycle

Service Container

Service Providers

Facades | Lecture and discussion of the topics using PowerPoint presentations

Readings | Recitation

Laboratory Exercises: Application of Service Container, Providers and Facades | 1. Online Laravel 11 Documentation (https://laravel.com/docs/11.x
2. https://laravel-news.com/category/tutorials
3. https://www.tutorialspoint.com/articles/index.php |
| Week 5-6 | | Understand and apply routing function, including the concepts of middleware and CSRF protection. | Laravel Basics: Routing

Middleware

CSRF protection

Controllers | Lecture and discussion of the topics using PowerPoint presentations

Readings | Recitation

Laboratory Exercises: Application of Routing, Middleware, CSRF, Controller, Views and Blade Templating | 1. Online Laravel 11 Documentation (https://laravel.com/docs/11.x
2. https://laravel-news.com/category/tutorials
3. https://www.tutorialspoint.com/articles/index.php |

	Explore controller concept and UI views.	Views Blade Templates			
Week 7-8	Understand how to embed various types of requests and responses. Able to test error handling	Laravel Basics: Requests Responses URL Generation Session Validation Error Handling Logging	Lecture and discussion of the topics using PowerPoint presentations Readings	Quiz Laboratory Exercises: Application of request, response, URL generation, session, validation, error handling and error logging	1. Online Laravel 11 Documentation (https://laravel.com/docs/11.x 2. https://laravel-news.com/category/tutorials 3. https://www.tutorialspoint.com/articles/index.php
Week 9	**Midterm Examination**				
Week 10-11	Understand how to create and apply collections and localization. Able to format file storage	Collections Compiling Assets File storage Localization	Lecture and discussion of the topics using PowerPoint presentations Readings	Assignment Seat work	1. Online Laravel 11 Documentation (https://laravel.com/docs/11.x 2. https://laravel-news.com/category/tutorials 3. https://www.tutorialspoint.com/articles/index.php
Week 12-13	Understand the concept and function of database	Database Refresher Query Builder Pagination	Lecture and discussion of the topics using PowerPoint presentations	Quiz Laboratory Exercises:	1. Online Laravel 11 Documentation (https://laravel.com/docs/11.x 2. https://laravel-news.com/category/tutorials 3. https://www.tutorialspoint.com/articles/index.php

	Able to connect pages to database	Migrations Seeding Eloquent ORM	Readings	Application of query builder, pagination, migrations, and seeding	
Week 14-15	Authentication Authorization Email Verification Encryption Hashing Password Reset	Understand the concept of Security Able to identify the things that need to secure pages. Explore authentication, permissions and encryption.	Lecture and discussion of the topics using PowerPoint presentations Readings	Quiz Recitation Case Study discussion	1. Online Laravel 11 Documentation (https://laravel.com/docs/11.x 2. https://laravel-news.com/category/tutorials 3. https://www.tutorialspoint.com/articles/index.php
Week 16	Case Study Preparation				
Week 17	Case Study Presentation				
Week 18	**Final Examination**				

READINGS AND REFERENCES
· Online Laravel 11 Documentation - https://laravel.com/docs/11.x
· https://laravel-news.com/category/tutorials
· https://www.tutorialspoint.com/articles/index.php

COURSE REQUIREMENTS
Taking and Passing all Quizzes and Major Examinations
Completion and Submission of Laboratory Exercises and Project
Completion of assignments and readings
Class Participation

GRADING SYSTEM

Criteria	Midterm	Final Grading Period
Class Participation	5%	5%
Quizzes	30%	30%
Recitation	5%	5%
Activity / Exercises / Assignments	20%	20%
Major Examination	40%	40%

CLASSROOM POLICIES:

Regular attendance is expected of all students. Attendance will be recorded at the start of each class. A student is allowed a maximum of three (3) unexcused absences per semester.

Students are expected to arrive on time for every class. Three (3) instances of tardiness will be considered equivalent to one (1) unexcused absence.

Students who cannot attend an examination must inform the professor either in advance or at the first possible opportunity, providing a valid reason (e.g., medical emergency). The administration of a make-up examination may be arranged at the discretion of the instructor, depending on the legitimacy of the given reason. Failure to contact the instructor or failure to provide an acceptable explanation will result in a grade of zero (0) for the examination in question.
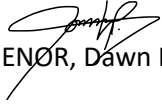
Assignments and all course requirements must be submitted on the due date. If a student is unable to submit on time due to valid reasons, they must inform the professor in advance or as soon as possible.

Engagement in class discussions and activities is highly encouraged and will count towards the final grade. Students are expected to make contributions to discussions, ask questions, and to engage with the course material.

Students should respect all the opinions and contributions of others during discussions. No disruptions or disrespect will be tolerated and may invoke disciplinary action.

Academic integrity is expected of all students. No form of cheating, plagiarism, or other dishonest conduct in any academic endeavor is tolerated. This includes copying others' work, using unauthorized materials on a test, claiming work done by another as one's own, or falsifying data.

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Noted by:

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