

# PARUL UNIVERSITY - FACULTY OF ENGINEERING & TECHNOLOGY

## DEPARTMENT OF INFORMATION TECHNOLOGY SYLLABUS (PROPOSED) FOR 6<sup>th</sup> B. TECH. PROGRAMME Web Development and Framework

**Type of Course:** B.Tech

**Prerequisite:** C++ & PHP basics

**Rationale:** Laravel is an MVC framework with bundles, migrations, and Artisan CLI. Laravel offers a robust set of tools and an application architecture that incorporates many of the best features of frameworks like CodeIgniter, Yii, ASP.NET MVC, Ruby on Rails, Sinatra, and others.

**Teaching and Examination Scheme:**

Teaching Scheme (Hrs./Week)			Credit	Examination Scheme					Total
L	T	P		External		Internal			
				Theory E	Practical V	Theory M	*C.E	Practical P.A	
3	0	0	3	60	0	20	20	0	100

L- Lectures; T- Tutorial/Teacher Guided Student Activity; P- Practical; E - End Semester Theory Exam; V - End Semester Viva Exam; M – Mid Semester Exam; P.A.- Progressive Assessment;

**Contents:**

Sr.	Topic	Weight age	Teaching Hrs.
1	<b>Introduction of Laravel PHP Framework:</b> Installing Laravel, Artisan CLI (command-line interface), Laravel Directory Structure, Configuring a new Laravel project, Artisan command to generate boilerplate code for a controller, Basic routing, Call a controller method from a route, Passing variables from controllers to views	15%	6
2	<b>HTML Template to Laravel Blade Template:</b> Template inheritance, Master layout, Extending the master layout, Displaying variables, Blade conditional statements, Blade Loops, Executing PHP functions in blade, Displaying Your Views, Creating and using a basic views, Loading a view into another view/nested views, Adding assets, Integrating with Bootstrap	15%	8
3	<b>Migrations:</b> Introduction, Requirements for running migrations, Artisan migration command, Migration structure, How to create a table using a migration, Laravel migration rollback, Database Seeding, Migrations for our project database	10%	8
4	<b>Using Forms and Gathering Input:</b> Creating contact us form, Validating user input, Sending email, Creating a file uploader, Validating a file uploader, Creating a custom error message  <b>Creating a registration &amp; user login form</b> Using Artisan command to create inbuilt user register and login system – Authenticating Your Application, Adding Custom Fields to Registration Form, Creating user profile page	15%	10

5	<b>Admin Panel Setup:</b> Introduction, Setup Admin Panel using Bootstrap theme, Create Admin login, Creating an admin authentication system, Encrypting and decrypting data	15%	6
6	<b>Using Controllers and Routes for URLs and APIs:</b> Introduction, Creating a basic controller, Creating a route using a closure, Making the controller RESTful, Using route groups, Building a RESTful API with routes  <b>Eloquent ORM (Storing and Using Data):</b> Eloquent ORM Models, Naming conventions, Table name and primary keys, Timestamps, Eloquent ORM INSERT, READ, UPDATE, DELETE, Using models in controllers, Displaying data from models in views	15%	8
7	<b>Creating and Using Composer Packages:</b> Introduction, Downloading and installing packages, Using a basic Shopping Cart package in our project  <b>Using Ajax and jQuery:</b> Introduction, Getting data from another page, Setting up a controller to return JSON data, Creating a JQuery, AJAX comment system  <b>Security &amp; Session:</b> Using Security, Sessions Effective	15%	6

**\*C.E-Continuous Evaluation:** It consists of Assignments/Seminars/Presentations/Quizzes/Surprise Tests (Summative/MCQ) etc

**Suggested books:**

1. Laravel 5 Essentials, Martin Bean, Packet Publishing.
2. Practical Laravel 5, Lukas White, Apress Publication.

**Suggested reference books:**

1. Web Design, Joel Sklar, Cengage Learning
2. Laravel Companion: Second Edition, Johnathon Koster
3. Pro PHP MVC, Chris Pitt, Apress

**Online Learning Resources**

1. <https://laravel.com/docs/5.7/installation>
2. <https://www.theseus.fi/bitstream/handle/10024/74052/Author.pdf>
3. <https://tuto-computer.com/download-220.html>

**Course Outcome:**

After successful completion of this course, students will be able to

1. Develop attractive responsive website using Laravel.
2. Have knowledge of the syntax and semantics of PHP.
3. Understand about MVC framework.
4. Have knowledge of using Laravel.