

Web Programming

Module name	Web Programming	
Module level	Undergraduate	
Code	IF221117	
Courses (if applicable)	Web Programming	
Semester	4	
Lecturer	Yisti Vita Via, S.ST, M.Kom (PIC) Agung Mustika Rizki, S.Kom, M.Kom Fawwaz Ali Akbar, S.Kom, M.Kom M. Muharrom A.H, S.Kom., M.Kom	
Language	Bahasa Indonesia and English	
Relation to curriculum	Undergraduate degree program; compulsory; 4th semester	
Type of teaching, contact hours	Lectures, < 60 students	
Teaching Methods	Cooperative learning, project-based learning, problem-based learning	
Workload	1. Lectures: 3 sks x 50 = 150 minutes (2 hours 30 minutes) per week. 2. Exercises and Assignments: 3 x 60 = 180 minutes (3 hours) per week. 3. Private study: 3 x 60 = 180 minutes (3 hours) per week	
Credit points	3 credit points (sks)	
Requirements according to the examination regulations	A student must have attended at least 80% of the lectures to sit in the exams.	
Mandatory prerequisites	Software Engineering	
Courses description	In this course, students will learn about the principles and characteristics of designing and creating a good website as well as how web technologies are being used in contemporary websites.	
Learning outcomes and their corresponding PLOs	After completing this module, a student is expected to:	
	CO1 Students are able to understand the development of web technology and the basics of HTML and CSS.	PLO2,PLO4, PLO6, PLO7, PLO10
	CO2 Students are able to create client-side applications using CSS, CSS Preprocessor and JavaScript.	PLO2,PLO4, PLO6, PLO7, PLO10
	CO3 Students are able to understand the workings of a dynamic web and basic PHP.	PLO2,PLO4, PLO6, PLO7, PLO10
	CO4 Students are able to create dynamic web applications with PHP	PLO2,PLO4, PLO6, PLO7, PLO10
	CO5 Students are able to create web service application/Restful API.	PLO2,PLO4, PLO6, PLO7, PLO10
Content	The material studied in this course includes : Basic HTML tags, Concepts of CSS and implementation in HTML, JavaScript for creating interactive displays,	

	Server-side PHP programming, Concepts of COOKIE and SESSION, File management in web development, CSS Preprocessot for improved CSS writing, Basic concepts of web Conten Management System (CMS), Basic concepts and types of frameworks, Basic concepts of RESTful API with framework, and Combining and applying basic web knowledge to create a comprehensive dynamic web application. This course is project-based, students are to be expected to apply their knowledge through projects and assignments.
Media employed	LCD, whiteboard, websites, books (as references), online meeting, etc.
Assessments and Evaluation	One written Midterm assessment (60 minutes) and one final oral exam (30 minutes), two short computer-based quizzes, takehome written assignments
Study and examination requirements and forms of examination	<p>The final grade in the module is composed of:</p> <ul style="list-style-type: none"> • Two short computer-based quizzes: 15% x 2 = 30% • Take-home written assignments: 15% • Written Midterm assessment: 25% • Final oral exam: 30% <p>Students must have a final grade of 55.6% or higher to pass.</p>
Reading List	<ul style="list-style-type: none"> • R. T. R. L. Bau, Panduan Praktis Pengembangan Web Dasar. Eureka Media Aksara, 2025. • M. I. Sa'ad, Buku Ajar Pemrograman Berbasis Web: Teori & Implementasi. Borneo Novelty Publishing, 2007. • M. Smith, PHP Crash Course: The Complete, Modern, Hands-On Guide. NoStarch Press, 2025. • R. Nixon, Learning PHP, MySQL & JavaScript, 7th Edition. O'Reilly Media, 2025. • W. Christian, H. Tobias, PHP and MySQL. Rheinwerk Publishing, 2025. • Sarabia, Rainier, Test-driven development with PHP 8 : build extensible, reliable, and maintainable enterprise-level applications using TDD and BDD with PHP. Packt Publishing, 2023. ISBN: 9781803230757. [Online]. Available: https://portal.igpublish.com/iglibrary/obj/PACKT0006391?searchid=17549781987799j5yfk9nKlzfOu3hu2Wc • Butti, Roberto, High performance with laravel octane : learn to fine-tune and optimize PHP and laravel apps using octane and an asynchronous approach. Packt Publishing, 2023. ISBN: 9781801819046. [Online]. Available: https://portal.igpublish.com/iglibrary/obj/PACKT0006384?searchid=17549781987799j5yfk9nKlzfOu3hu2Wc • Bouras, S. Aristides, PHP and Algorithmic thinking for the complete beginner learn to think like a programmer, 3rd revised edition. Packt Publishing, 2024. ISBN: 9781836209362. [Online]. Available: https://portal.igpublish.com/iglibrary/obj/PACKT0007275?searchid=1754978020251ZIVkPzn8QovQe1kDYUGRh • Shanker, Surabhi, Building dynamic web experiences with PHP : Harness the power of PHP to build dynamic and scalable websites. BPB Publications, 2024. ISBN: 9789355516596. [Online]. Available: https://portal.igpublish.com/iglibrary/obj/BPB0000570?searchid=1754978020251ZIVkPzn8QovQe1kDYUGRh

	<ul style="list-style-type: none">• Negrin, Elias, MySQL Cookbook: 100+ recipes for database development and administration in MySQL. BPB Publications, 2024. ISBN: 9789355517142. [Online]. Available: https://portal.igpublish.com/iglibrary/obj/BPB0000632?searchid=175497790900276NHVj7vCEtRAFo9_MC_T
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