

Department of Mathematics
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Course	Course Name : Development of Web Application
	Course Code : KM184832
	Credit : 2
	Semester : 8

Description of Course

This course provides the understanding and ability to implement programming in relation to the development of web-based applications that are very rapid development. This course covers materials about basic concepts of web-based programming as well as the latest web development technologies such as framework, service-oriented architecture and technology in search engines.

Learning Outcome

PLO 4	[C5] Students are able to work on a simple and clearly defined scientific task and explain the results, both written and verbally either on the area of pure mathematics or applied mathematics or computing sciences
PLO 5	[C3] Students are able to make use of the principles of long life learning to improve knowledge and current issues on mathematics

Course Learning Outcome

1. Knowing and understanding the infrastructure components in web application development
2. Able to implement client side programming and server sideserta integrate with databaseuntuk used in web application development
3. Understand and implement framework and content management in web-based application development
4. Provide basic knowledge of Service-Oriented Architecture and API

Main Subject

1. Client-side programming
 - a. Introduction of environment and infrastructure in relation to web programming
 - b. HTML5, CSS, forms, JavaScript
2. Server side programming
 - a. Basic and advanced PHP programming
 - b. Use of Object Oriented Programming in PHP
 - c. AJAX and JQuery
3. Integration database with web-based applications
 - a. Connection management
 - b. Utilization of session and cookies for authentication
4. MVC and web-responsive architecture
 - a. MVC
 - b. Bootstrap framework
5. Service-Oriented Architecture
 - a. Cloud Services
 - b. Web Service APIs
 - c. Personalized search on the World Wide Web
 - d. Web Crawling
 - e. Social Web Search

Prerequisites

Object Oriented Programming
Database System

Reference

1. Building Responsive Web Applications AJAX and PHP, Darie, C., et. All., PACKT Publishing Ltd, 2006
2. Building JavaScript, CSS, HTML, and Ajax-Based Applications for iPhone, Android, Palm Pre, BlackBerry, Windows Mobile and Nokia S60, Frederick, R. G., Lal, R. Apress, 2009
3. PHP and MySQL Web Development, Welling, L., Thomson, L., SAMS, 2001

Supporting Reference

1. CSS3 for web designers, Cederholm, D. Jeffrey Zeldman, 2010

2. Web Services Technologies : State of the Art definitions, Standards, Case Study, Albereshine A., Fyhrer P., Pasquier J. 2009
3. HTML5 for web designer, Keith, J., 2010
4. <https://getbootstrap.com/>