	Universitas Negeri Surabaya Faculty of Engineering, Undergraduate Study Program in Informatics Engineering	Document Code

SEMESTER LEARNING PLAN

Courses		CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Framework Programming		5520203061		T=3	P=0	ECTS=4.77	7	July 17, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	....	....	Aditya Prapanca, S.T., M.Kom.

Learning model	Project Based Learning

Program Learning Outcomes (PLO)	PLO study program that is charged to the course
	Program Objectives (PO)
	PLO-PO Matrix

		P.O			

PO Matrix at the end of each learning stage (Sub-PO)

P.O	Week															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Short Course Description	This course examines various ways of implementing three important layers, namely; presentation layer, business logic layer, and persistence layer in building enterprise-scale applications using various desktop-based programming frameworks (such as J2EE or .NET) and web (such as CodeIgniter, CakePHP, Yii, Laravel, etc.). This course also teaches web service development

References	Main :

1. Deitel, H.M. and Deitel,P.J. 2009. Java How to Program, 10th Edition. New Jersey: Prentice Hall.
2. Michaelis, M. 2008. Essential C# 3.0 for .NET Framework 3.5. Microsoft.NET Development Series. Boston: Addison-Wesley.
3. Oberg, R.J. 2002. Introduction to C# Using .NET. New Jersey: Prentice Hall..
4. Foster, R. 2015. CodeIgniter Web Application Blueprints. Birmingham: PACKT Publishing.
5. Watts, J., Gonzalez, J. 2014. CakePHP 2 Application Cookbook. Birmingham: PACKT Publishing..
6. Makarov, A. 2013. Yii Application Development Cookbook - Second Edition. Birmingham: PACKT Publishing..
7. Matula, T. 2013. Laravel Application Development Cookbook. Birmingham: PACKT Publishing.
8. Calvert, Charlie, & Kulkarni, Dinesh. 2009. Essential LINQ. Boston: Addison-Wesley Professional.
9. Kuate, Pierre Henri, et.al. 2009. NHibernate in Action. New York: Manning Publication.
10. Galloway, John, et.al. 2014. Professional ASP.NET MVC 5. Birmingham: Wrox
11. Alur, Deepak, et.al. 2003. Core J2EE Patterns Best Practices and Design Strategies (2nd Edition). New Jersey

Supporters:

Supporting lecturer	Andi Iwan Nurhidayat, S.Kom., M.T.

Week-	Final abilities of each learning stage (Sub-PO)	Evaluation		Help Learning, Learning methods, Student Assignments, [Estimated time]		Learning materials [References]	Assessment Weight (%)
		Indicator	Criteria & Form	Offline (offline)	Online (online)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

1	Students practice the concept of Model, View, Controller (MVC)	Students are able to: 1. Explain the concept of MVC with examples and the meaning of Model, View and Controller and their functions. 2. Explain the characteristics of the Framework. 3. Explain the system using the Framework approach.		Lectures, discussions 2 X 50			0%
2	Concept practice, Automatic File Include, Router and index.php	Students are able to: 1. Explain the concept of Automatic Include files 2. Explain the Concept of Routers, URL Rewriting on servers and URL Rewirting on PHP 3. Explain the concept and function of Index.php		Approach: Scientific Model: Cooperative Method: Discussion, Presentation 2 X 50			0%
3	Concept practice, Automatic File Include, Router and index.php	Students are able to: 1. Explain the concept of Automatic Include files 2. Explain the Concept of Routers, URL Rewriting on servers and URL Rewirting on PHP 3. Explain the concept and function of Index.php	**Form of Assessment** : Participatory Activities	Approach: Scientific Model: Cooperative Method: Discussion, Presentation 2 X 50			25%
4	Practice the stages of creating controllers (BaseController and homeController) as well as dependency injection in designing systems/applications	Students are able to: 1. Explain the concept of BaseController and HomeController controllers. 2. Explain the objectives and general design stages starting from output, input, process, database, to application/system architecture.		Approach: Scientific Model: Cooperative Method: Discussion, Presentation 2 X 50			0%
5	Practice the stages of creating controllers (BaseController and homeController) as well as dependency injection in designing systems/applications	Students are able to: 1. Explain the concept of BaseController and HomeController controllers. 2. Explain the objectives and general design stages starting from output, input, process, database, to application/system architecture.		Approach: Scientific Model: Cooperative Method: Discussion, Presentation 2 X 50			0%
6	Practice the concepts of Views, Templates, views for controllers and static file handlers (CSS, java script and images)	Students can: 1. Explain the concept of Views and Templates and how to use them. 2. Determine when to use views and templates appropriately.	**Form of Assessment** : Participatory Activities	Approach: Scientific Model: Cooperative Method: Discussion, Presentation, Assignment Exercises and practicum 2 X 50			25%

7	Practice the concepts of Views, Templates, views for controllers and static file handlers (CSS, java script and images)	Students can: 1. Explain the concept of Views and Templates and how to use them. 2. Determine when to use views and templates appropriately.		Approach: Scientific Model: Cooperative Method: Discussion, Presentation, Assignment Exercises and practicum 2 X 50			0%
8	UTS			2 X 50			0%
9	Introduction to ASP.NET and ASP.NET Core	Students are able to: 1. Explain the concept of ASP.NET Framework2. Explaining ASP.NET Core Framework Concepts		Approach: Scientific Model: Cooperative Method: Discussion, Presentation 2 X 50			0%
10	Practice: ASP.NET Web Forms Page Controller ASP.NET MVC Controller View Model Configuration	Students are able to: 1. Explaining the concept of ASP.NET Web Forms 2. Explaining the concept of ASP.NET MVC 3. Explaining the Controller 4. Explaining the Controller View5 Explaining the Controller Model		2 X 50			0%
11	Practice: ASP.NET Web Forms Page Controller ASP.NET MVC Controller ViewModel Configuration	Students are able to: 1. Explaining the concept of ASP.NET Web Forms 2. Explaining the concept of ASP.NET MVC 3. Explaining the Controller 4. Explaining the Controller View5 Explaining the Controller Model		2 X 50			0%
12	Practice: ASP.NET MVC Model	Students are able to: 1. Explain the concept of Data Access Layer 2. Explain the concept of View Model 3. Explain the concept and function of Index.php		2 X 50			0%
13	ASP.NET MVC Model Practices	Students are able to: 1. Explain the concept of Data Access Layer 2. Explain the concept of View Model 3. Explain the concept and function of Index.php		2 X 50			0%
14	Practice the concept of View - Controller , Razor	Students are able to: 1. Explain the concept of View - Controller2. Explaining Razor3. Explaining the concept of generic method access		2 X 50			50%
15	Practice the concept of View - Controller , Razor	Students are able to: 1. Explain the concept of View - Controller2. Explaining Razor3. Explaining the concept of generic method access		2 X 50			0%
16							0%

Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Participatory Activities	50%
		50%

Notes

1. **Learning Outcomes of Study Program Graduates (PLO - Study Program)** are the abilities possessed by each Study Program graduate which are the internalization of attitudes, mastery of knowledge and skills according to the level of their study program obtained through the learning process.
2. **The PLO imposed on courses** are several learning outcomes of study program graduates (CPL-Study Program) which are used for the formation/development of a course consisting of aspects of attitude, general skills, special skills and knowledge.
3. **Program Objectives (PO)** are abilities that are specifically described from the PLO assigned to a course, and are specific to the study material or learning materials for that course.
4. **Subject Sub-PO (Sub-PO)** is a capability that is specifically described from the PO that can be measured or observed and is the final ability that is planned at each learning stage, and is specific to the learning material of the course.
5. **Indicators for assessing** abilities in the process and student learning outcomes are specific and measurable statements that identify the abilities or performance of student learning outcomes accompanied by evidence.
6. **Assessment Criteria** are benchmarks used as a measure or measure of learning achievement in assessments based on predetermined indicators. Assessment criteria are guidelines for assessors so that assessments are consistent and unbiased. Criteria can be quantitative or qualitative.
7. **Forms of assessment:** test and non-test.
8. **Forms of learning:** Lecture, Response, Tutorial, Seminar or equivalent, Practicum, Studio Practice, Workshop Practice, Field Practice, Research, Community Service and/or other equivalent forms of learning.
9. **Learning Methods:** Small Group Discussion, Role-Play & Simulation, Discovery Learning, Self-Directed Learning, Cooperative Learning, Collaborative Learning, Contextual Learning, Project Based Learning, and other equivalent methods.
10. **Learning materials** are details or descriptions of study materials which can be presented in the form of several main points and sub-topics.
11. **The assessment weight** is the percentage of assessment of each sub-PO achievement whose size is proportional to the level of difficulty of achieving that sub-PO, and the total is 100%.
12. TM=Face to face, PT=Structured assignments, BM=Independent study.