	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
Mobile Programming	5520203063		T=3	P=0	ECTS=4.77	5	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)

PO - 1	Students can define aspects in developing mobile application software (mobile web and native).
PO - 2	Students can design and design mobile applications.

PLO-PO Matrix

P.O
PO-1
PO-2

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
PO-1																
PO-2																

Short Course Description: This course provides practical knowledge and experience regarding the application of mobile device technology. Development of various mobile-based applications by paying attention to important aspects in the mobile software development process. Understanding of the tools and IDE used. Understanding of compatibility aspects of mobile device applications. Development, testing, error finding and repair of mobile-based program code. Program coding in this course is divided into two, namely programming on mobile web and Android native

References

Main :

1. Bai, G. 2011. JQuery Mobile First Look. Birmingham: PACKT Publishing.
2. Boonstra, L. 2014. Hands-On Sencha Touch 2: A Real-World App Approach. United States of America: O 19Reilly Media, Inc.
3. Gifford, M. 2012. PhoneGap Mobile Application Development Cookbook. Birmingham: PACKT Publishing.
4. Myer, T. 2012. Beginning PhoneGap. Indiana: John Wiley & Sons, Inc.
5. Wolber, D., Abelson, H., Spertus, E., Looney, L. 2015. App Inventor 2: Create Your Own Android Apps. United States of America: O 19Reilly Media, Inc.
6. Beer P, Simmons, C 2015. Hello App Inventor! Android Programming For Kids And The Rest Of Us. Manning Publication Co.

Supporters:

Supporting lecturer: Dodik Arwin Dermawan, S.ST., S.T., M.T.
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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	Create a simple application using HTML 5 and JQuery Mobile	- Applying HTML 5 syntax- Identifying JQTouch- Identifying Sencha Touch- Explaining iUI- Explaining iWebKit- Identifying page structure- Creating and deleting dialogs		Scientific approach, presentations, lectures, questions and answers, discussions and problem-based learning 2 X 50			0%
2	Implemented JQuery Mobile configuration and content management	1. Apply default configuration 2. Implement event handling 3. Display content 4. Using columns and grids in content 5. Using collapsible blocks		Scientific approach, presentations, lectures, questions and answers, discussions and problem-based learning 2 X 50			0%
3	Create toolbars and buttons with JQuery Mobile	- Applying toolbar types - Applying button types - Displaying buttons		Scientific approach, presentations, lectures, questions and answers, discussions and problem-based learning 2 X 50			0%
4			**Form of Assessment** : Participatory Activities				25%
5	Understand basic usage of PhoneGap	- Explains the history of PhoneGap - Explains the basics of using PhoneGap on Android devices		Scientific approach, presentations, lectures, questions and answers, discussions and problem-based learning 2 X 50			0%
6	Implemented the use of accelerometer and Geolocation on PhoneGap	1. Explains the options and arguments in the accelerometer 2. Detect device movement using the accelerometer 3. Explains position information and object coordinates 4. Explain the options and arguments in geolocation		Scientific approach, presentations, lectures, questions and answers, discussions and problem-based learning 2 X 50			0%

7	Create applications containing media using PhoneGap	- Identify types of media files - Implement the use of media objects - Implement error handling	**Form of Assessment** : Participatory Activities	Scientific approach, presentations, lectures, questions and answers, discussions and problem-based learning 2 X 50			25%
8							0%
9	Implement user interface components on Android devices	- Apply layout settings - Apply orientation settings		Scientific approach, presentations, lectures, questions and answers, discussions and problem-based learning 2 X 50			0%
10	Create a basic user interface on an Android device	- Identify basic view types - Implement basic views		Scientific approach, presentations, lectures, questions and answers, discussions and problem-based learning 2 X 50			0%
11							0%
12	Loads advanced user interface on Android devices	1. Implement menu creation 2. Processing images 3. Added time display 4. Implement web view		Scientific approach, presentations, lectures, questions and answers, discussions and problem-based learning 2 X 50			0%
13	Create a database connected application in Android	- Apply application connection techniques to the database		Scientific approach, presentations, lectures, questions and answers, discussions and problem-based learning 2 X 50			0%
14	Create a user interface in AppInventor!	1. Create a user interface using a designer 2. Create a user interface using built-in components 3. Apply screen, layout and canvas settings		Scientific approach, presentations, lectures, questions and answers, discussions and problem-based learning 2 X 50			50%

15	Create variables, branches, procedures, lists and loops in AppInventor!	1.- Implement variable naming and calling. Change variables 2.Implement branching by using variables as conditions 3.Implement comments 4.Implementing lists 5.Implement looping		Scientific approach, presentations, lectures, questions and answers, discussions and problem-based learning 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** ability in the process and student learning outcomes are specific and measurable statements that identify the ability 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.