



UNIVERSITAS GADJAH MADA
 Faculty of Mathematics and Natural Sciences
 Department of Computer Science and Electronics

Sekip Utara Bulaksumur Yogyakarta 55281 Telp: +62 274 546194 Email: dep-ike.mipa@ugm.ac.id Website: <http://dcse.fmipa.ugm.ac.id>

Bachelor in Computer Science

Telp : +62 274 546194
 Email : prodi-s1-ilkom.mipa@ugm.ac.id
 Website : <http://dcse.ugm.ac.id/>

MODULE HANDBOOK

Module name	Mobile Application Development																																						
Module level	Undergraduate																																						
Code	MII-3512																																						
Courses (if applicable)	Mobile Application Development																																						
Semester	Odd																																						
Contact person	I Gede Mujiyatna., S.Kom. M.Kom																																						
Lecturer																																							
Language	Bahasa Indonesia																																						
Relation to curriculum	1. Undergraduate degree program, compulsory, 5th semester. 2. International undergraduate program, compulsory, 5th semester.																																						
Type of teaching, contact hours	1. Undergraduate degree program: lectures, < 60 students, 2. International undergraduate program: lectures, < 30 students.																																						
Workload	1. Lectures: 3 x 50 = 150 minutes (2 hours 30 menit) 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 75% of the lectures to sit in the exams.																																						
Recommended prerequisites	Algorithms and Data Structures																																						
Learning outcomes (course outcomes) and their corresponding PLOs	<p>After completing this module, a student is expected to:</p> <p>CO1 Able to explain and identify the character of the mobile platform environment and the character of the mobile application.</p> <p>CO2 Able to explain and identify mobile application development concepts.</p> <p>CO3 Able to design and evaluate software designs for mobile platforms.</p> <p>CO4 Able to develop standalone and multiplatform integrated mobile applications.</p> <p>CO5 Able to explain testing methods and processes, performance measurement and deploy of mobile applications.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2">PLO</th> <th>CO1</th> <th>CO2</th> <th>CO3</th> <th>CO4</th> <th>CO5</th> </tr> </thead> <tbody> <tr> <td rowspan="5">Program Learning Outcome (PLO)</td> <td>PLO1</td> <td></td> <td></td> <td>√</td> <td>√</td> <td>√</td> </tr> <tr> <td>PLO2</td> <td>√</td> <td>√</td> <td>√</td> <td></td> <td>√</td> </tr> <tr> <td>PLO3</td> <td></td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> </tr> <tr> <td>PLO4</td> <td></td> <td></td> <td>√</td> <td>√</td> <td></td> </tr> <tr> <td>PLO5</td> <td></td> <td></td> <td>√</td> <td>√</td> <td>√</td> </tr> </tbody> </table>	PLO		CO1	CO2	CO3	CO4	CO5	Program Learning Outcome (PLO)	PLO1			√	√	√	PLO2	√	√	√		√	PLO3		√	√	√	√	PLO4			√	√		PLO5			√	√	√
PLO		CO1	CO2	CO3	CO4	CO5																																	
Program Learning Outcome (PLO)	PLO1			√	√	√																																	
	PLO2	√	√	√		√																																	
	PLO3		√	√	√	√																																	
	PLO4			√	√																																		
	PLO5			√	√	√																																	

Contents	<p>(a) Characteristics of mobile applications.</p> <p>(b) History of mobile application frameworks</p> <p>(c) Overview of mobile application development languages: Objective-C and Java.</p> <p>(d) Application models of mobile application frameworks.</p> <p>(e) User-interface design for mobile applications.</p> <p>(f) Managing application data.</p> <p>(g) Integrating with cloud services</p> <p>(h) Integrating networking, the OS and hardware into mobile-applications</p> <p>(i) Addressing enterprise requirements in mobile applications: performance, scalability, modifiability, availability, and security.</p> <p>(j) Testing methodologies for mobile applications.</p> <p>(k) Publishing, deployment, maintenance and management.</p>																																																	
Study and examination requirements and forms of examination	<p>The evaluation is done in 3 forms, namely:</p> <ol style="list-style-type: none"> 1. Trial, either midterm or semester test, 2. Two tasks, including individual or group assignments to be completed within a certain timeframe, and team project 3. Two quizzes, held on face-to-face, once before midterm exam and once after midterm exam, with a short answer form. <p>Assessment is done using benchmark assessment, with the aim of measuring the level of student understanding related to the target and class rank.</p>																																																	
Media employed	LCD, blackboard, and websites.																																																	
Assessments and Evaluation	<table border="1" data-bbox="524 1005 1408 1268"> <thead> <tr> <th>Type</th> <th>Percentage</th> <th>CO1</th> <th>CO2</th> <th>CO3</th> <th>CO4</th> <th>CO5</th> </tr> </thead> <tbody> <tr> <td>Quiz</td> <td>15%</td> <td>√</td> <td>√</td> <td></td> <td></td> <td>√</td> </tr> <tr> <td>Individual Task</td> <td>10%</td> <td></td> <td></td> <td>√</td> <td>√</td> <td>√</td> </tr> <tr> <td>Group Task</td> <td>30%</td> <td></td> <td></td> <td>√</td> <td>√</td> <td></td> </tr> <tr> <td>Midterm Exam</td> <td>20%</td> <td>√</td> <td>√</td> <td>√</td> <td>√</td> <td></td> </tr> <tr> <td>Final Exam</td> <td>25%</td> <td></td> <td></td> <td>√</td> <td>√</td> <td>√</td> </tr> <tr> <td>Total</td> <td>100%</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Type	Percentage	CO1	CO2	CO3	CO4	CO5	Quiz	15%	√	√			√	Individual Task	10%			√	√	√	Group Task	30%			√	√		Midterm Exam	20%	√	√	√	√		Final Exam	25%			√	√	√	Total	100%					
Type	Percentage	CO1	CO2	CO3	CO4	CO5																																												
Quiz	15%	√	√			√																																												
Individual Task	10%			√	√	√																																												
Group Task	30%			√	√																																													
Midterm Exam	20%	√	√	√	√																																													
Final Exam	25%			√	√	√																																												
Total	100%																																																	
Reading List	<ul style="list-style-type: none"> • Bill Phillips, Chris Stewart, Brian Hardy, and Kristin Marsicano, Android Programming: The Big Nerd Ranch Guide, Big Nerd Ranch LLC, 3rd edition, 2017; • Gergely Orosz, Building Mobile Apps at Scale: 39 Engineering Challenges, Primedia E-launch LLC, 2021 • Shaun Lewis, Native Mobile Development: A Cross-Reference for iOS and Android, O'Reilly Media; 1st edition, 2019 																																																	

Created date : June 28, 2022

Revision date : June 28, 2022