



**MODULE HANDBOOK DESCRIPTION**

Module designation	<i>Web and Mobile Programming</i>	
Code	<i>FBD3212</i>	
Semester(s) in which the module is taught	<i>6 / third year</i>	
Person responsible for the module	<i>A.S.Rachman, ST., MT.</i>	
Language	<i>Indonesian</i>	
Relation to curriculum	<i>Elective for Computer Engineering</i>	
Teaching methods	<i>lectures, small group discussion, project &amp; case base method.</i>	
Workload (incl. contact hours, self-study hours)	Contact minutes every week, each week of the 16 weeks/semester: <ul style="list-style-type: none"> <li>• Lectures: 2 x 50 minutes</li> <li>• Exercises and Assignments: 2 x 60 minutes</li> <li>• Self-study: 2 x 60 minutes.</li> </ul> Total study hours = 5 hours 40 minutes/week.	
Credit points	<i>2 SKS (~3.2 ECTS)</i>	
Required and recommended prerequisites for joining the module	-	
Module objectives/intended learning outcomes	<i>1. Students are able to differentiate design techniques, programming concepts and database concepts of web and mobile-based.</i>	<i>PLO3 (L)</i>
	<i>2. Students are able to plan the concept of developing mobile applications that are equipped with local storage features both file-based and relational databases.</i>	<i>PLO4 (H)</i>
	<i>3. Students are able to plan mobile applications that are built with backend services and other web services to enrich application features and meet the needs of mobile applications for enterprise scale.</i>	

	<p>4. <i>Students are able to produce content or media products that have creative and objective values.</i></p> <p>5. <i>Students are able to implement and test the concepts learned to create android mobile applications.</i></p>	<i>PLO5 (M)</i>
Content	<p>1. <i>HTML 5, CSS, JavaScript, PHP</i></p> <p>2. <i>Arrays, Objects, Form Handling, Files and Directories, Sessions and Cookies.</i></p> <p>3. <i>Databases</i></p> <p>4. <i>Guestbook, News Application, Business Registration</i></p> <p>5. <i>Content Management System</i></p> <p>6. <i>Android programming</i></p> <p>7. <i>Activities and Intents</i></p> <p>8. <i>Layout for Interface</i></p> <p>9. <i>Android Widgets</i></p> <p>10. <i>Storing Data using Arrays and Files</i></p> <p>11. <i>Database on Android</i></p> <p>12. <i>File Distribution and Application Distribution</i></p> <p>13. <i>Location Services</i></p> <p>14. <i>Android Application Development Project</i></p>	
Examination forms	<p>- <i>Case based</i></p> <p>- <i>Project based</i></p>	
Study and examination requirements	<p><i>The final grade in the module is composed of:</i></p> <p>a. <i>Case I assessment: 20%</i></p> <p>b. <i>Case II assessment: 20%</i></p> <p>c. <i>Project based: 60%</i></p> <p><i>Students must have a final grade of 65% or higher to pass</i></p>	

Reading list	<ol style="list-style-type: none"> <li>1. URL: <a href="https://www.w3.org/TR/2004/REC-webarch-20041215/">https://www.w3.org/TR/2004/REC-webarch-20041215/</a></li> <li>2. Thomas A. Powel. 2010. <i>HTML &amp; CSS: The Complete Reference, Fifth Edition</i>. The McGraw-Hill: United States.</li> <li>3. Duckett, Jon. 2004. <i>Beginning Web Programming with HTML, XHTML, and CSS</i>. Wiley Publishing: Canada.</li> <li>4. Bulger, Brad., Greenspan, Jay., Wall David. 2004. <i>MySQL/PHP Database Applications, Second Edition</i>. Wiley Publishing: Indiana.</li> <li>5. Wildenius, Michael., Axmark, David., MySQL AB. 2003. <i>MySQL Reference Manual Documentation From the Source</i>. O'Reilly Community Press: Swedish.</li> <li>6. Lerdorf, Rasmus., Tatroe, Kevin., MacIntyre, Peter. 2006. <i>Programming PHP, Second Edition</i>. O'Reilly Media: United States.</li> <li>7. Deitel, Harvey, Deitel, Paul. <i>Introduction to World Wide Web</i></li> <li>8. URL: <a href="http://searchsoa.techtarget.com/definition/content-management-system">http://searchsoa.techtarget.com/definition/content-management-system</a></li> <li>9. URL : <a href="http://www.toptenreviews.com/business/internet/best-content-management-system-software/">http://www.toptenreviews.com/business/internet/best-content-management-system-software/</a></li> <li>10. <i>Official Android Developer Documentation</i> <a href="http://developer.android.com/">http://developer.android.com/</a>.</li> <li>11. Esposito, Dino, <i>Architecting Mobile Solutions for the Enterprise, 2012</i>, O'Reilly Media.</li> <li>12. Iversen, Jakob &amp; Eierman, Michael, <i>Learning Mobile App Development A Hands-on Guide to Building Apps with iOS and Android , 2014</i>, Pearson Education.</li> <li>13. Meier, Reto, <i>Professional Android 4 Application Development, 2012</i>, John Wiley and Sons.</li> <li>14. McWherter, Jeff &amp; Gowell, Scott, <i>Professional Mobile Application Development, 2012</i>, John Wiley &amp; Sons.</li> </ol>
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