

Module designation	IF570 Mobile Application Programming		
Semester(s) in which the module is taught	7		
Person responsible for the module	Alexander Waworuntu Vincentius Kurniawan Alfa Yohannis		
Language	Indonesian		
Relation to curriculum	1. Elective 1		
Teaching methods	<ul style="list-style-type: none"> - Lecture - Problem Based - Demonstration - Hands-On 		
Workload (incl. contact hours, self-study hours)	<p>Total workload: 136.08 hours</p> <p>Theory</p> <ul style="list-style-type: none"> - 23.34 hours of synchronous lecture. - 56.04 hours of Self-study and assignments - 11.34 hours related to exam and self study <p>Lab</p> <ul style="list-style-type: none"> - 23.35 hours of lab module (and in-class assistance) - 16.34 hours of self-lab and assignments - 5.67 hours related to exam and self study 		
Credit points	3 SKS (5.04 ECTS)		
Required and recommended prerequisites for joining the module	<p>Required:</p> <ul style="list-style-type: none"> - IF433 Object Oriented Programming 		
Module objectives/intended learning outcomes	Course Learning Outcome	Related ELOs	
		ELO	Performance Indicator
	Students can produce works in the form of Android applications that are useful for solving a particular problem topic.	I	Ability to develop and integrate software and hardware as scalable distributed systems that incorporate various device types for the purpose of solving engineering problems.
Content	This course provides the basic knowledge required by an Android mobile application programmer, such as the use of activity,		

	<p>fragments, and intents; UI concept on Android; utilization of views, data management; sharing data; Android messaging feature; location-based services and Android services; Android networking; and Android application publishing, both theoretically and practically.</p> <p>Specifically, this course contains these topics:</p> <ol style="list-style-type: none"> 1. Introduction to Android Operating System 2. Android Activity, Layout Settings, View, and UI Resources 3. Components, User-Interface and User Interaction in Android Studio 4. Activity, Intent, and Fragment 5. Canvas and 2D Graphics 6. Animation and Multimedia 7. Application Project 8. Utilization of Android's Internal Storage 9. Internal Database with SQLite 10. Service and Background Process 11. External Database with Web Service 12. Sensor 13. Location-based Service 14. Google Play Store
Examination forms	<ul style="list-style-type: none"> - Written Test - Product Based
Study and examination requirements	<p>The total average score for the class activity (40%), midterm (25%), and final (35%) exams must be more than or equal to 55 (C).</p>
Reading list	<ol style="list-style-type: none"> 1. N. Smyth. Android Studio 4.0 Development Essentials – Java Edition (2020). Payload Media. 2. J.F. DiMarzio. Beginning Android Programming with Android Studio (2017). John Wiley & Son. 3. D. Griffiths & D. Griffiths. Head First Android Development (2017). O'Reilly Media. 4. Android Developer Fundamentals, https://google-developer-training.github.io/android-developer-fundamentals-course-concepts-v2/ 5. Advanced Android Development, https://google-developer-training.github.io/android-developer-advanced-course-practicals/index-book.html