



## MODULE SPECIFICATION

Part 1: Information			
Module Title	Mobile and Web Application Development [TSI]		
Module Code	UFCFLX-6-3	Level	Level 6
For implementation from	2023-24		
UWE Credit Rating	6	ECTS Credit Rating	3
Faculty	Faculty of Environment & Technology	Field	Computer Science and Creative Technologies
Department	FET Dept of Computer Sci & Creative Tech		
Module Type:	Standard		
Pre-requisites	None		
Excluded Combinations	None		
Co-requisites	None		
Module Entry Requirements	None		
PSRB Requirements	None		

Part 2: Description
<p><b>Educational Aims:</b> The aim of this module is to introduce student to mobile application development in various platforms. To teach students how to develop Android mobile applications. Give an overview of Android application building blocks and design principles. Let students practice using hands-on Android application development exercises. Prepare students for work in Android mobile application development industry.</p> <p><b>Outline Syllabus:</b> Mobile platforms. Types of mobile apps development;            Android as platform and its tools;            Android project structure, resources, code organisation;            Graphical User Interface for mobile systems. Use of Android GUI components in application;            Creating dynamic application logic with Java programming language;            Android application lifecycle. Activities, Fragments;            Storing and caching data on client with Android;            Asynchronous processes, integration with web-service;            Device sensors and hardware usage in application</p> <p><b>Teaching and Learning Methods:</b> Learning and teaching will be provided to students in two forms: lectures and labs. During lectures, theoretical aspects of the course will be provided to</p>

## STUDENT AND ACADEMIC SERVICES

students by the teaching staff. Lectures will be supported by presentation published and available to the students on e.tsi.lv under the module section. Also, additional materials, like code examples, text books, publications on the internet, videos etc will be presented in e.tsi.lv. During labs, each student receives an individual task to perform

Android are considered as an example of operation system for mobile devices, and Java programming language is used for labs. In addition to learning activities during taught sessions, students are expected to spend time outside of class on independent learning activities. These might include completing assignment tasks, independent reading, practising new skills on personal projects and completing self-assessment test etc.

### Part 3: Assessment

This module assessment is split into two components (A – Exam, B – Labs):

A1 - final 2-hour examination which will assess the students understanding of taught material that forms part of the learning outcomes but cannot easily be assessed through practical tasks.

The practical assignment component should be completed individually (i.e. this is not group work) and represents 50% of the final module mark. The practical assignment has two elements, as follows.

B1 – a series of labs. Labs and exploring basic principles of mobile application development using JAVA programming language for Mobile Devices and Mobile Operating System Android. An application and its source code should be provided to the teaching staff.

B2: A series of tests. Answers for tests should be completed and uploaded to e.tsi.lv

First Sit Components	Final Assessment	Element weighting	Description
Examination - Component A	✓	50 %	Examination
Portfolio - Component B		40 %	series of 5 labs, exploring basic principles of mobile application development using JAVA programming language for Android Operation System. An application and its source code should be provided to the teaching staff.
In-class test - Component B		10 %	5 tests with theoretical questions about mobile operation systems, Android, JAVA programming language for Android development
Resit Components	Final Assessment	Element weighting	Description
Examination - Component A		50 %	Written Examination
Portfolio - Component B		40 %	series of 5 labs, exploring basic principles of mobile application development using JAVA programming language for Android Operation System. An application and its source code should be provided to the teaching staff.
In-class test - Component B		10 %	1 test with theoretical questions about mobile operation systems, Android, JAVA programming language for Android development.

### Part 4: Teaching and Learning Methods

## STUDENT AND ACADEMIC SERVICES

Learning Outcomes	On successful completion of this module students will achieve the following learning outcomes:	
	<b>Module Learning Outcomes</b>	<b>Reference</b>
	Know Android application components and their lifecycle; Android platform and services it provides; Android application development environment and process; Android API and device sensor capabilities; Android application performance optimization guidelines	MO1
	Design mobile application UI taking into account mobile device capabilities	MO2
	Use Android software development environment and tools and basic UI components; implement Android UI screen layouts; process UI component and lifecycle events	MO3
	Use networking, sensors, and Google APIs	MO4
	Compare and contrast mobile programming with general purpose programming	MO5
	Review an existing Android application against best architecture, performance, and variety of device support practices	MO6
Contact Hours	<b>Independent Study Hours:</b>	
	Independent study/self-guided study	48
	<b>Total Independent Study Hours:</b>	48
	<b>Scheduled Learning and Teaching Hours:</b>	
	Face-to-face learning	34
	<b>Total Scheduled Learning and Teaching Hours:</b>	34
	<b>Hours to be allocated</b>	60
	<b>Allocated Hours</b>	82
Reading List	<p>The reading list for this module can be accessed via the following link:</p> <p><a href="https://rl.talis.com/3/uwe/lists/5C9AF47A-2C04-2572-2F9F-8BBD12CA6C18.html?lang=en-gb&amp;login=1">https://rl.talis.com/3/uwe/lists/5C9AF47A-2C04-2572-2F9F-8BBD12CA6C18.html?lang=en-gb&amp;login=1</a></p>	

### Part 5: Contributes Towards

This module contributes towards the following programmes of study:

Computer Science and Software Development {Double Degree} [Oct][FT][TSI][4yrs] BSc (Hons) 2020-21

Computer Science and Software Development {Double Degree} [Feb][FT][TSI][4yrs] BSc (Hons) 2020-21