

**COURSE RECORD**

Code	<b>COMP 205</b>
Name	<b>Mobile Programming</b>
Hour per week	5 (3 + 2)
Credit	4
ECTS	7
Level/Year	Undergraduate
Semester	Fall
Type	Compulsory
Prerequisites	COMP 101 Art of Computing
Coordinator(s)	Dr. Samet TONYALI
Description	The course aims to teach the essentials of mobile programming to students who have some background on object-oriented programming. The students will learn how to write cross-platform (iOS and Android) mobile applications using Flutter framework in the Android Studio IDE. The course introduces the fundamental components used in mobile programming such as user interface components, routes and navigation, local and remote data storage using databases, and data retrieval from the Web. The course has both lecture and practice sessions. The lecture session covers theoretical concepts whereas the practice sessions give students a hands-on experience on the topics covered in the lecture sessions.
Objectives	Students will be aware of requirements for developing applications for resource-constrained and mobile devices. Students will gain experience on using Android Studio IDE to develop mobile applications. Students will learn to develop fully-fledged mobile applications.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> LO1. Identify components of a mobile application LO2. Visualize routes in a mobile application by sketching each screen in the application LO3. Use Android Studio IDE to develop mobile applications LO4. Analyze functional and non-functional requirements of a mobile application LO5. Debug their code to achieve bug-free applications LO6. Create fully-fledged mobile applications
Additional Info	
Requirements	
Teaching Methodology	Learners will be provided with as many opportunities of hands-on practice as possible with the aim of striking a balance between learner-centeredness and sufficient guidance. Various forms of interaction (i.e., pair work and group work) will also be encouraged to cater for learners with different learning styles. Additionally, individuals will be expected to produce both in-class writings and homework assignments in addition to the reading tasks, which will encourage them to reflect and think critically. Technology will also be incorporated into the classroom procedures in order to create a better learning environment.
Reading List	“Build Native Mobile Apps with Flutter” <a href="https://www.udacity.com/course/build-native-mobile-apps-with-flutter--ud905">https://www.udacity.com/course/build-native-mobile-apps-with-flutter--ud905</a> “Everything to Know Before You Start”

<https://www.udemy.com/course/pre-google-flutter-and-dart-everything-you-need-to-know/>

“Learn Flutter – Beginners Course”

<https://www.udemy.com/course/learn-flutter-beginners-course/>

“Introduction to Flutter”

<https://www.udemy.com/course/introduction-to-flutter/>

“Flutter Tutorial for Beginners – YouTube Video List”

<https://youtube.com/playlist?list=PL4cUxeGkcC9jLYyp2Aoh6hcWuxFDX6PBj>

“Flutter’s Official Get Started”

<https://flutter.dev/docs/get-started/install>

Ethical Rules and Course Policy	<ul style="list-style-type: none"> <li>• For the AGU Make-up policy, please refer to the website <a href="https://goo.gl/HbPM2y">https://goo.gl/HbPM2y</a> section 26.</li> <li>• Eating and drinking is permitted unless it offends other students</li> <li>• English should always be used to communicate with one another during instruction hours.</li> <li>• Please, respect the allotted times provided for breaks.</li> <li>• Cell phones are allowed but their voices must be turned down. If cellphone usage bothers the instructor or the class, the instructor has the final say on the issue. Consequences include but are not limited to loss of participation points, extra assignments, and/or being asked to leave the classroom.</li> <li>• Please, bring the required materials, specifically your laptop computers.</li> </ul>
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#### ASSESSMENT

Evaluation Criteria	Weight (%)
Assignments	15%
Group Project & Presentation	40%
Midterm	20%
Final	25%
Total	100%

For a detailed description of grading policy and scale, please refer to the website <https://goo.gl/HbPM2y> section 28.

#### COURSE LOAD

Activity	Duration (hour)	Quantity	Work Load (hour)
In class activities	2	14	28
Async Materials (Videos, Readings, etc.)	1	13	13
Lab	2	13	26
Group work for project	40	1	40
Pre-work for Presentation	3	1	3
Pre-work for Midterm	30	1	30
Pre-work for Final	30	1	30
Assignments	2	13	26
<b>General Sum</b>			<b>196</b>

ECTS: 7 (Work Load/25-30)

**WEEKLY SCHEDULE**

<b>W</b>	<b>Date</b>	<b>Topic</b>	<b>Activities/Assignments</b>	<b>Outcomes</b>
1	Oct 4-8	Introduction and Flutter Basics, Part 1	Flipped learning, problem solving, Assignment 1	L01, L03, L06
2	Oct 11-15	Flutter Basics, Part2	Flipped learning, problem solving, Assignment 2	L01, L03, L05, L06
3	Oct 18-22	Widgets, Styling, and Adding Logic, Part 1	Flipped learning, problem solving, Assignment 3	L01, L02, L03, L06
4	Oct 25-29	Widgets, Styling, and Adding Logic, Part 2	Flipped learning, problem solving, <b>Project Proposal</b>	L01, L02, L03, L06
5	Nov 1-5	Responsive & Adaptive User Interfaces and Apps; Widget and Flutter Internals	Flipped learning, problem solving, Assignment 4	L02, L03, L04, L06
6	Nov 8-12	Navigation & Multiple Screens	Flipped learning, problem solving, Assignment 5	L02, L03, L06
7	Nov 15-19	<b>Fall Break</b>	<b>Project Submission #1</b>	
8	Nov 22-26	State Management	Flipped learning, problem solving, Assignment 6	L04, L06
9	Nov 29 – Dec 3	<b>Lecture-Free Week</b>	A mobile application developer will be invited to share their experience.	
10	Dec 6-10	Working with User Input & Forms	Flipped learning, problem solving, <b>Midterm Exam</b>	L03, L04, L06
11	Dec 13-17	From Web to App: Data & Backend	Flipped learning, problem solving, Assignment 7	L03, L04, L06
12	Dec 20-24	Adding User Authentication	Flipped learning, problem solving, <b>Project Submission #2</b>	L02, L03, L04, L06
13	Dec 27-31	Using Native Device Features (Camera, Maps, Location, etc.)	Flipped learning, problem solving, Assignment 8	L03, L04, L06
14	Jan 3-7	Firebase SDK and Push Notifications	Flipped learning, problem solving, Assignment 9	L03, L04, L06
15	Jan 10-14	Running Native Java or Kotlin Code, Publishing Android Apps, Adding Animations	Flipped learning, problem solving, <b>Project Submission #3</b>	L04, L06
16	Jan 17-26	<b>Final Exam</b>	<b>Project Submission #4</b>	

Prepared by Dr. Samet TONYALI

**\*\*This syllabus is tentative (it can be altered at the discretion of the instructor)\*\***