



Mobile Application Development (ISE 507) Course Details

Course Name	Course Code	Term	Lecture Hours	Application Hours	Lab Hours	Credit	ECTS
Mobile Application Development	ISE 507	Both	3	0	0	3	5

Pre-requisite Course(s)	
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Course Language	English
Course Type	Elective Courses
Course Level	Fen Bilimleri Yüksek Lisans
Mode of Delivery	
Learning and Teaching Strategies	
Course Coordinator	

Course Lecturer(s)	
Course Assistants	
Course Objectives	The objective of this course is to provide students with the knowledge and skills necessary for mobile application development. Topics covered will include mobile operating systems and development platforms, user interfaces for mobile devices, maps and location-based services, data stores, telephony and SMS and, multimedia interfaces and sensors. Android development platform is chosen for development and testing for mobile applications in this course.
Course Learning Outcomes	<p>The students who succeeded in this course;</p> <ul style="list-style-type: none"> • Explain the differences between different mobile operating systems and platforms • Create interactive user interfaces in mobile devices • Design and develop database applications in mobile platforms • Use map and location-based services in mobile devices • Develop applications to monitor incoming and outgoing phone calls and send and receive SMS messages • Develop mobile applications using sensors in mobile devices
Course Content	Mobile Devices. Mobile Platforms. Mobile Operating Systems. Mobile Application Development. User Interface Design in Mobile Devices. Data Persistent Techniques in Mobile Platforms. Map and Location-based Services. Audio, Video and Using the Camera. Telephony and SMS. Sensors.

Weekly Subjects and Related Preparation Studies

Week	Subjects	Preparation
1	Introduction to Mobile Computing	Chapter 1.
2	Mobile Operating Systems and Mobile Platforms	Chapter 1.
3	User Interface Design and Development	Chapter 3, 4 and 5
4	User Interface Design and Development	Chapter 3, 4 and 5
5	User Interface Design and Development	Chapter 3, 4 and 5
6	Data Persistence Techniques	Chapter 6 and 7
7	Data Persistence Techniques	Chapter 6 and 7
8	Data Persistence Techniques	Chapter 6 and 7
9	Maps and Location-based Services	Chapter 8
10	Maps and Location-based Services	Chapter 8
11	Sensors	Chapter 14
12	Telephony and SMS	Chapter 12
13	Project Presentations	
14	Project Presentations	
15	Final Examination Period	Review of topics
16	Final Examination Period	Review of topics

Sources

Course Book:	1. Professional Android 2 Application Development, by Reto Meier, 2010 Wiley Publishing, Inc. ISBN: 978-0-470-56552-0
Other Sources:	1. Mobile Applications: Architecture, Design, and Development, by Valentino Lee, Heather Schneider, Robbie Schell, Prentice Hall, 2004 ISBN: 013117263
	2. The Android Developer's Cookbook: Building Applications with the Android SDK (Developer's Library), by James Steele, Addison-Wesley Professional, 2010, ISBN: 9780321741233
	3. Mobile Design and Development: Practical Concepts and Techniques for Creating Mobile Sites and Web Apps, by Brian Fling, O'Reilly Media, 2009, ISBN: 0596155441
	4. Android A Programmers Guide, by J.F. DiMarzio, McGraw-Hill Osborne Media, 2008, ISBN: 9780071599887
	5. Java How To Program 6th ed, by Deitel & Deitel, Prentice Hall, Inc. URL : http://www.deitel.com/books/downloads.html

Evaluation System

Requirements	Number	Percentage of Grade
Attendance/Participation	-	-
Laboratory	-	-
Application	-	-
Field Work	-	-
Special Course Internship	-	-
Quizzes/Studio Critics	-	-
Homework Assignments	2	20
Presentation	-	-
Project	1	20

Seminar	-	-
Midterms Exams/Midterms Jury	1	20
Final Exam/Final Jury	1	40
Total	5	100

Percentage of Semester Work	
Percentage of Final Work	100
Total	100

Course Category

Core Courses	
Major Area Courses	
Supportive Courses	
Media and Management Skills Courses	
Transferable Skill Courses	

The Relation Between Course Learning Competencies and

Program Qualifications

#	Program Qualifications / Competencies	Level of Contribution				
		1	2	3	4	5
1	An ability to apply knowledge of mathematics, science, and engineering.					X
2	An ability to design and conduct experiments, as well as to analyze and interpret data.					
3	An ability to design a system, component, or process to meet desired needs.				X	
4	An ability to function on multi-disciplinary domains.					
5	An ability to identify, formulate, and solve engineering problems.					X
6	An understanding of professional and ethical responsibility.					
7	An ability to communicate effectively.					
8	Recognition of the need for, and an ability to engage in life-long learning.					
9	A knowledge of contemporary issues.					X
10	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.					X
11	Skills in project management and recognition of international standards and methodologies					
12	An ability to produce engineering products or prototypes that solve real-life problems.					X
13	Skills that contribute to professional knowledge.					X
14	An ability to make methodological scientific research.					

15	An ability to produce, report and present an original or known scientific body of knowledge.			X	
16	An ability to defend an originally produced idea.				

ECTS/Workload Table

Activities	Number	Duration (Hours)	Total Workload
Course Hours (Including Exam Week: 16 x Total Hours)	16	3	48
Laboratory			
Application			
Special Course Internship			
Field Work			
Study Hours Out of Class	16	5	80
Presentation/Seminar Preparation			
Project	1	25	25
Homework Assignments	2	10	20
Quizzes/Studio Critics			
Preparation of Midterm Exams/Midterm Jury	1	20	20
Preparation of Final Exams/Final Jury	1	30	30
Total Workload			223