

## 340453 - DAMO-I7P23 - Mobile Application Development

Coordinating unit:	340 - EPSEVG - Vilanova i la Geltrú School of Engineering
Teaching unit:	723 - CS - Department of Computer Science
Academic year:	2019
Degree:	BACHELOR'S DEGREE IN INFORMATICS ENGINEERING (Syllabus 2018). (Teaching unit Optional) BACHELOR'S DEGREE IN INFORMATICS ENGINEERING (Syllabus 2010). (Teaching unit Optional)
ECTS credits:	6
Teaching languages:	Catalan

### Teaching staff

Coordinator:	Josep M Merenciano
Others:	Josep M Merenciano

### Degree competences to which the subject contributes

#### Specific:

2. CEFC1. Ability to design, develop, select and value applications and informatic systems affirming its reliability, security and quality corresponding to ethical principals and legislation and current rules.
3. CEFC17. Ability to design and evaluate computer interfaces that guarantee accessibility and usability of informatic systems, services and applications.
4. CEFC8. Ability to analyze, to design, to construct and to maintain applications in a well built, secure and efficient way choosing the most adequate paradigms and languages.
5. CEIS4. Ability to identify and analyze problems and design, develop, deploy, test and document software solutions based on an adequate knowledge of theories, models and techniques.
1. CESI3. Ability to actively participate in the specification, design, implementation and maintenance of information and communication systems.
14. CETI3. Ability to set up methodologies focused on user and development organization, valuation and application management and systems based on information technologies which secure ergonomic accessibility and use of I\_CETI6. CETI6. Ability to design systems, applications and services based on network technologies, including internet, website, e-commerce, multimedia, interactive services and mobile computing.

#### Transversal:

6. SELF-DIRECTED LEARNING - Level 1. Completing set tasks within established deadlines. Working with recommended information sources according to the guidelines set by lecturers.
7. SELF-DIRECTED LEARNING - Level 2: Completing set tasks based on the guidelines set by lecturers. Devoting the time needed to complete each task, including personal contributions and expanding on the recommended information sources.
8. SELF-DIRECTED LEARNING - Level 3. Applying the knowledge gained in completing a task according to its relevance and importance. Deciding how to carry out a task, the amount of time to be devoted to it and the most suitable information sources.
9. SELF-DIRECTED LEARNING. Detecting gaps in one's knowledge and overcoming them through critical self-appraisal. Choosing the best path for broadening one's knowledge.
10. EFFICIENT ORAL AND WRITTEN COMMUNICATION. Communicating verbally and in writing about learning outcomes, thought-building and decision-making. Taking part in debates about issues related to the own field of specialization.
12. EFFECTIVE USE OF INFORMATION RESOURCES - Level 3. Planning and using the information necessary for an academic assignment (a final thesis, for example) based on a critical appraisal of the information resources used.
13. EFFECTIVE USE OF INFORMATION RESOURCES. Managing the acquisition, structure, analysis and display of information from the own field of specialization. Taking a critical stance with regard to the results obtained.

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### Teaching methodology

See catalan version

### Learning objectives of the subject

See catalan version

### Study load

Total learning time: 150h	Hours large group:	30h	20.00%
	Hours medium group:	0h	0.00%
	Hours small group:	30h	20.00%
	Guided activities:	0h	0.00%
	Self study:	90h	60.00%

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### Content

(ENG) Anàlisi de l'estat de la qüestió	Learning time: 1h Theory classes: 1h
<p>Description: (ENG) Conèixer el moment actual pel que fa a SO mòbils, tipus de dispositius i eines de desenvolupament</p> <p>Specific objectives: (ENG) Què és l'Android i quin és el seu context competencial Entendre la diferència entre aplicacions multiplataforma i aplicacions natives</p>	
(ENG) Arquitectura Android i univers Google	Learning time: 7h Theory classes: 5h Self study : 2h
<p>Description: (ENG) Cal entendre sobre què desenvolupem, què ens ofereix el SO, i com aquest s'interrelaciona amb d'altres serveis</p> <p>Related activities: (ENG) Instal·lació de les eines de desenvolupament</p> <p>Specific objectives: (ENG) Estructura interna del SO Android Eines de desenvolupament i plataforma de mercat Serveis i Apis Google</p>	
(ENG) Arquitectura d'una aplicació Android	Learning time: 23h Theory classes: 6h Guided activities: 9h Self study : 8h
<p>Description: (ENG) Compendre l'estructura bàsica d'una aplicació Android</p> <p>Related activities: (ENG) Diverses activitats de programació Part de la pràctica</p> <p>Specific objectives: (ENG) Manifest Descripcions XML Vincles entre el Java i l'XML: la classe R Patró MVC i les seves peuliaritats en l'Android</p>	

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(ENG) Programació d'interfícies	Learning time: 31h Theory classes: 12h Guided activities: 12h Self study : 7h
Description: (ENG) Com programar les interfícies Android Related activities: (ENG) La pràctica Specific objectives: (ENG) Widgets view Adapters Convenis i estils	
(ENG) Activities	Learning time: 22h Theory classes: 6h Guided activities: 8h Self study : 8h
Description: (ENG) Entendre el fluc de processos i la visió de l'usuari Related activities: (ENG) La pràctica Specific objectives: (ENG) Cicle de vida de les activitats Intents. Mecanisme de pass de missatges Resolució i filtrat d'intents	
Observer pattern	Learning time: 30h Practical classes: 6h Guided activities: 12h Self study : 12h
Description: Observer pattern and its Java implementation Specific objectives: See catala version	

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MVC	Learning time: 36h Theory classes: 12h Guided activities: 12h Self study : 12h
Description: content english	

### Planning of activities

name english	Hours: 25h Self study: 25h
Tests	Hours: 1h Self study: 1h

### Qualification system

See catalan version

### Regulations for carrying out activities

See catalan version

### Bibliography

Basic:

MacLean, Dave; Komatineni, Satya; Allen, Grant. Pro Android 5 [Recurs electrònic] [on line]. 5th ed. Berkeley: Apress, 2015 [Consultation: 17/10/2019]. Available on: <[https://discovery.upc.edu/iii/encore/record/C\\_\\_Rb1228229?lang=cat](https://discovery.upc.edu/iii/encore/record/C__Rb1228229?lang=cat)>. ISBN 9781430246817.

Complementary:

Meier, Reto. Professional Android 4 application development. Indianapolis: John Wiley & Sons, 2012. ISBN 9781118262153.