Course guides
340453 - DAMO-I7P23 - Mobile Application Development

Unit in charge: Vilanova i la Geltrú School of Engineering
Teaching unit: 723 - CS - Department of Computer Science.
Degree: BACHELOR'S DEGREE IN INFORMATICS ENGINEERING (Syllabus 2010). (Optional subject).
BACHELOR'S DEGREE IN INFORMATICS ENGINEERING (Syllabus 2018). (Optional subject).
Academic year: 2020  ECTS Credits: 6.0  Languages: Catalan

LECTURER
Coordinating lecturer: 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 adecuated 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.
6. 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 broadenning 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.

TEACHING METHODOLOGY

See catalan version
LEARNING OBJECTIVES OF THE SUBJECT

See catalan version

STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours small group</td>
<td>30,0</td>
<td>20.00</td>
</tr>
<tr>
<td>Self study</td>
<td>90,0</td>
<td>60.00</td>
</tr>
<tr>
<td>Hours large group</td>
<td>30,0</td>
<td>20.00</td>
</tr>
</tbody>
</table>

Total learning time: 150 h

CONTENTS

(ENG) Anàlisi de l’estat de la qüestió

Description:
(ENG) Conèixer el moment actual pel que fa a SO mòbils, tipus de dispositius i eines de desenvolupament

Specific objectives:
(ENG) Què és l’Android i quin és el seu context competencial
Entendre la diferència entre aplicacions multiplataforma i aplicacions natives

Full-or-part-time: 1h
Theory classes: 1h

(ENG) Arquitectura Android i univers Google

Description:
(ENG) Cal entendre sobre què desenvolupem, què ens ofereix el SO, i com aquest s’interrelaciona amb d’altres serveis

Specific objectives:
(ENG) Estructura interna del SO Android
Eines de desenvolupament i plataforma de mercat
Serveis i Apis Google

Related activities:
(ENG) Instal·lació de les eines de desenvolupament

Full-or-part-time: 7h
Theory classes: 5h
Self study : 2h
**Arquitectura d'una aplicació Android**

*Description:*  
(ENG) Comprendre l'estructura bàsica d'una aplicació Android

*Specific objectives:*  
(ENG) Manifest  
Descripcions XML  
Vincles entre el Java i l'XML: la classe R  
Patró MVC i les seves peculiaritats en l'Android

*Related activities:*  
(ENG) Diverses activitats de programació  
Part de la pràctica

*Full-or-part-time:* 23h  
Theory classes: 6h  
Guided activities: 9h  
Self study: 8h

**Programació d'interfícies**

*Description:*  
(ENG) Com programar les interfícies Android

*Specific objectives:*  
(ENG) Widgets view  
Adapters  
Convenis i estils

*Related activities:*  
(ENG) La pràctica

*Full-or-part-time:* 31h  
Theory classes: 12h  
Guided activities: 12h  
Self study: 7h

**Activities**

*Description:*  
(ENG) Entendre el fluc de processos i la visió de l'usuari

*Specific objectives:*  
(ENG) Cicle de vida de les activitats  
Intents. Mecanisme de pass de missatges  
Resolució i filtrat d'intents

*Related activities:*  
(ENG) La pràctica

*Full-or-part-time:* 22h  
Theory classes: 6h  
Guided activities: 8h  
Self study: 8h
Observer pattern

Description:
Observer pattern and its Java implementation

Specific objectives:
See catala version

Full-or-part-time: 30h
Practical classes: 6h
Guided activities: 12h
Self study : 12h

MVC

Description:
content english

Full-or-part-time: 36h
Theory classes: 12h
Guided activities: 12h
Self study : 12h

ACTIVITIES

name english

Related competencies:
07 AAT N2. 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.
07 AAT N1. SELF-DIRECTED LEARNING - Level 1. Completing set tasks within established deadlines. Working with recommended information sources according to the guidelines set by lecturers.
04 COE. 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.
07 AAT N3. 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.

Full-or-part-time: 25h
Self study: 25h

Tests

Full-or-part-time: 1h
Self study: 1h

GRADING SYSTEM

See catalan version
EXAMINATION RULES.
See catalan version

BIBLIOGRAPHY

Basic:

Complementary: