Universitat de Lleida

DEGREE CURRICULUM
APLICACIONS PER A DISPOSITIUS MOBILS

Academic year 2013-14

Subject's general information

Subject name	APLICACIONS PER A DISPOSITIUS MOBILS
Code	102025
Semester	2n Q Avaluació Continuada
Typology	Obligatòria
ECTS credits	6
Theoretical credits	0
Practical credits	0
Department	Informàtica i Enginyeria Industrial
Important information on data processing	Consult this link for more information.
Office and hour of attention	Wednesday de 17 to 19 H.

MONTSERRAT SENDIN VELOSO

Subject's extra information

This subject belongs to a optional specialization module called 'Information Technologies'.

RECOMMENDATION: Knowledge in Java programming

Learning objectives

See Competences section

Competences

University of Lleida strategic competences

- **Master Information and Communication Technologies.**

  Goals

  - Knowing the Android platform and which are the elements that integrate it
  - Knowing the most recommended IDE
  - Testing applications developed for putting them in practice
  - Knowing the required stages for applications until their publication and commercialization

- **Master a foreign language.**

  Goals

  - Get familiar with the english material provided

Degree-specific competences

- **Ability to conceive systems, applications and services based on network technologies, which include the internet, web pages, electronic commerce, multimedia, interactive services and mobile computing.**

  Goals

  - Get familiar in the User Interface design
  - Knowing and managing some used API for Android
  - Lay the foundations for the implementation of additional functionalities (data base access, location utility, resources and functionalities from the device, etc.)
  - Be able to concept and develop applications for the Android operating system

Subject contents

Laying the foundations

Block I - Getting started

- Theme 1 - Introduction to the Android platform

- Theme 2 - First steps: development environment
- Theme 3 - Basics of Android applications

Block II – Basic questions of User Interfaces

- Theme 4 - Widgets: basic controls and selection controls

- Theme 5 - Orgnanizing the screen: *Layouts*
- Theme 6 - Localization and resources

Block III – Additional questions of User Interfaces

- Theme 7 - Tabs design

- Theme 8 – Menus design
- Theme 9 – Design of the UIs for multiple screens with *fragments*

Exploring functionalities

Block IV – More advanced aspects

- Theme 10 - Working with the database SQLite
- Theme 11 - Usage of the GPS. Geographical location
- Theme 12 - Publication and distribution of an Android application

Methodology

PRESENTIAL PART

- Theory Groups
  - Theoric-practical Classes
    - Classes supported with snapshots
    - During sessions exemples and little exercices (mini-activities) will be shown and proposed
    - Following and solving these mini-activities in class will be considered in the final mark
    - Material in English

NO PRESENTIAL PART

- Practical activities will be developen in non presential hours

Evaluation

Continued assessment

- **40% Theory**
  - Partial 1: 20%
    - Minimal mark required: 4
    - If Partial 1 < 3,5 = REC corresponding part
    - If 3,5<= Parrial 1 <=4 = Oral exam of the mini-activities, or REC
  - Partial 2: 20%
    - Minimal mark required: 4,5
    - If Partial 2 < 3,5 = REC corresponding part
    - If 3,5<= Partial 2 <=4,5 = Oral exam of the practical activity, or REC
  - Exam typology: concepts fixation and problems resolution

- **60% Practical**

- Continued work during sessions and practical development
- Working in pairs
- Programmed and non delayable dates
- Mini-activities: 15%
- Delivery 1: 15% ⇒ presential delivery
- Deliveries 2 and 3: 30% ⇒ presential delivery

- **Possible paths to the success:**
  - Minimal mark of 3,5 in each partial and success the oral exam to weigh (or REC)
  - Achieve the minimal mark required in each partial (or in REC) to weigh
  - In any case: **Approved = Final Mark >= 5**

Bibliography

Books

- F. Ableson, C. Collins, R. Sen

  "Android, guía para desarrolladores"

  Anaya Multimedia, 2011

- S. Komatineni , D. MacLean , S. Hashimi

  "Pro Android 3"

  Apress, 2011

- D. Smith , J. Friesen

  "Android recipes: a Problem-solution approach"

  Apress, 2011

- C. Collins, M. D. Galpin, M. Kaeppler

  "Android in practice"

  Manning Publications, 2011

- Z. Mednieks, L. Dornin, G. B. Meike, M. Nakamura

  "Programming Android. Java Programming for the New Generation of Mobile Devices"

  O'Reilly Media, Inc., 2011

Other:

- Professional Android 4 Application Development (Meier)
- Busy Coder's Guide to Android Development (Murphy)
- Android Cookbook (Darwin)
- Android Developer's Cookbook (Steele & To)
- Android in Action, 2nd Edition (Ableson, Sen, & King)
- Android Application Development for Dummies (Felker)

Materials and complementary resources