

340622 - PRDM-R1P07 - Mobile Devices Programming

Coordinating unit: 340 - EPSEVG - Vilanova i la Geltrú School of Engineering
Teaching unit: 707 - ESAII - Department of Automatic Control
Academic year: 2016
Degree: MASTER'S DEGREE IN AUTOMATIC SYSTEMS AND INDUSTRIAL ELECTRONICS (Syllabus 2012).
(Teaching unit Optional)
ECTS credits: 5 Teaching languages: Catalan, Spanish, English

Teaching staff

Coordinator: FRANCESC XAVIER LLANAS PARRA
CRISTOBAL RAYA GINER

Prior skills

Java and/or C programming

Degree competences to which the subject contributes

Specific:

1. CEV02 - Analyze and evaluate programming techniques of mobile devices.

Transversal:

2. 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

In the learning sessions of this subject, the professor will introduce theoretical explanations and illustrative examples, concepts, methods and basic results of the matter. These sessions are made of theoretical classes and sessions of laboratory. Along the course the method of project/problems based learning (PBL) will be applied.

In the theoretical classes the theoretic explanations and the basic concepts of the subject of study will be introduced, and in the practical sessions of laboratory the professor will increase the knowledge with the concepts and necessary methods to be able to carry out the problems or projects to solve in the practical work. The practices of laboratory will come true individually, or in reduced groups.

The tasks outside of the classroom that one must carry out or individually or in group, they are the base of the activities, and obligatory to be able to progress appropriately in the subject. These activities include the problems and proposed works, and the previous works to be able to carry out the practices.

Learning objectives of the subject

Identification of characteristics and restrictions of mobile devices.
Management of new technologies of mobile devices from the point of view of programming.
Programming applications for mobile devices.
Implementation and application startup.

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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%

Content

Mobile devices

Degree competences to which the content contributes:

Programming languages for mobile devices

Degree competences to which the content contributes:

Programming techniques for mobile devices

Degree competences to which the content contributes:

Specification, design and implementation of applications for mobile devices

Degree competences to which the content contributes:

Interaction with mobile applications in the area of robotics and automatic systems

Degree competences to which the content contributes:

Application Programming in Android-based mobile devices

Degree competences to which the content contributes:

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Qualification system

This evaluation is formed by one or two exams of evaluation PA, practical works PR, and works or problems in a group or individual TGI.

The weighted average of the final note NF corresponds to:

Nota final= $0,3xPA + 0,4xPR + 0,3xTGI$.

Regulations for carrying out activities

The evaluation tests will be carried out individually.

It is indispensable condition to have carried out the practices with sufficiency and in a present way.

For the realization of the practices one must have carried out the previous necessary studies correctly

A follow-up of the progress of the works will be carried on and its presentation.

Bibliography

Basic:

Allen, Grant. Beginning Android 4 [Recurs electrònic] [on line]. [Berkeley]: Apress, 2012 [Consultation: 21/01/2015]. Available on: <<http://proquest.safaribooksonline.com/9781430239840?uicode=politicat>>. ISBN 9781430239840.

Tomás Gironés, Jesús. El gran libro de Android. 3a ed. Barcelona: Marcombo, 2013. ISBN 9788426719768.

Complementary:

Eckel, Bruc. Piensa en Java. 4a ed. Madrid [etc.]: Prentice Hall, 2007. ISBN 9788489660342.

Friesen, Jeff. Learn Java for Android development. 3rd ed. New York: Apress, 2014. ISBN 9781430264545.