

Centre	University College of Engineering of Vitoria-Gasteiz
Name of subject	26006 – Industrial Informatics Extension
Qualification	Degree in Computer Management and Information Systems Engineering
Type	Elective
Credits	6 ECTS
Year	4
Term(s)	2nd
Department	Systems and Automation Engineering
Language	Spanish

Outcomes / Objectives

Applications of industrial informatics and industrial communications.

Syllabus

Introduction. Specific problems of industrial applications. Operating systems specific for industrial applications. Fundamental characteristics of the operating systems used in industrial applications. Embedded system design and programming. Construction problems of embedded systems such as those found in industrial applications (robotics, etc.). Distributed applications. Basic concepts for the construction of distributed applications. Introduction to object-oriented programming. Man-machine interface. Importance of the man-machine interface in industrial control applications. Construction of graphical applications with visual programming environments.

Methodology

Teaching Method

Face-to-Face Teaching Hours								
Lectures	Seminars	Classroom practice	Lab. practice	Computer sessions	Clinical practice	Workshops	Industrial workshops	Field practice
36		6	18					
Student Hours of Non Face-To-Face Activities								
Lectures	Seminars	Classroom practice	Lab. practice	Computer sessions	Clinical practice	Workshops	Industrial workshops	Field practice
36		14	40					

Assessment System

General criteria

Clarification regarding assessment

Bibliography

Basic Bibliography

- BARR AND MASSA Programming Embedded Systems: with C and GNU development Tools, O'ReillyBURNS, A. y WELLINGS, A. 2003
- Sistemas de tiempo real y Lenguajes de Programación, Ed. Addison-Wesley Iberoamericana, 3ª Ed. STALLINGS, W. 2005.
- Sistemas Operativos. 5ª Ed. (Prentice-Hall)CASTRO, M. y otros 2007 Comunicaciones Industriales: Sistemas Distribuidos y Aplicaciones. Ed. UNED

In-depth Bibliography

- Deitel & Deitel. "Java, How to Program. 3/e". Prentice Hall, 2000. <http://www.deitel.com/>.

Magazines

- Revista Iberoamericana de Automática e Informática Industrial (<http://riai.isa.upv.es/>)
- IEEE Transactions on Industrial Informatics Computers in Industry Control Engineering

Websites

- www.ehu.es
- <http://www.mindview.net/Books/TIJ/>
- <http://www.mindview.net/Books/TICPP/ThinkingInCPP2e.html>
- <http://lejos-osek.sourceforge.net/>