Course Unit Description - (SADIT)

(Systems and Distributed Telecommunications Applications)

(Mestrado em Engenharia Electrotécnica e de Computadores)

Academic year: 2008/2009

isep

Subject group: Electrónica e Telecomunicações

	Semestral		**Compulsory**	
Mode of study	Diurno		**Hours/Week** **T-**Teórica	2
Year	1º		**PL-**Prática-Laboratorial	2
Semester	2º		**OT-**Orientação Tutorial	1

ECTS 6

Objectives

The goal of this course unit is to provide the students with:
1) An accessible and appropriate language for the development of distributed systems;
2) Concepts, models, protocols and specific platforms used in distributed systems and applications;
3) The skills to develop distributed applications using TCP/IP, UDP, HTTP, RMI, RPC or CORBA

Course Contents

1 Java language:
1.1 Object Oriented Programming;
1.2 Classes, Objects, Primitive Data Types, Data Control;
1.3 Events and Multi-threading;
1.4 I/O
1.5 Graphical User Interfaces (GUI) Development;
2 Models e Technologies for Distributed Systems:
2.1 Centralised Model;
2.2 Distributed Model;
2.3 Basic Communication Models (Protocols, Ports, etc.);
2.4 Supporting Technologies;
3 Development of Distributed Applications:
3.1 Distributed Applications using TCP/IP;
3.2 Distributed Applications using UDP;
3.3 Distributed Applications using other protocols or specific platforms (Java ME, JINI, etc.).

Recommended reading

Java, How to Program, 6th Edition, H. M. Deitel and J. P. Deitel, Prentice Hall, 2005.
Java P2P Networking, Daniel Brookshier, Navaneeth Krishnan, Darren Govoni and Juan Carlos Soto, Sams Publishing, 2002.
Java Network Programming and Distributed Computing, David Reilly and Michael Reilly, Addison-Wesley Professional; 2002.
Distributed Programming with Java, Qusay H. Mahmoud, Manning, 2000.
Java Network Programming, M. Hughes, M. Shoffner and D. Hamner, 2nd Edition, Manning, 1999.
Using Java, 2nd Edition, Que Corporation, Macmillan Publishing, 1996.
Course Notes and Slides.

Teaching Methods

Case-based and project-based learning: the course is organised around the study and analysis of examples as well as the development of small projects.

Assessment methods

Development, presentation and discussion of small projects and other course related activities: 50 %
Final Written Examination: 50 %

	Name
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