Course Unit Description - (LASMU)

(Multi-Robot Systems Laboratory)

(Mestrado em Engenharia Electrotécnica e de Computadores)

Academic year: 2008/2009

isep

Subject group: Automação e Robótica

	Semestral	**Compulsory**		
Mode of study	Diurno	**Hours/Week**	**PL-**Prática-Laboratorial	9
			OT-Orientação Tutorial	1
Year	2º			
Semester	1º			

ECTS 9

Objectives

This is a laboratory curricular unit aimed to the integration of concepts, techniques and methods studied in other course units. It's primary objective is the development of engineering skills in the various phases of development in a engineering project: requirements analysis, specification, design and implementation.

Course Contents

The course uses an engineering problem to be solved involving multiple robots as a setup to develop and integrate the students knowledge and skills.
The students therefore analyze and specify a particular complex engineering problem in the multiple robotics area, and design a solution. This solution is implemented and validated resulting in a functional prototype.

Recommended reading

rt of Systems Architecting, Eberhardt Rechtin, Mark Maier, CRC Press, 2002
Systems Analysis and Design, Alan Dennis, Roberta M. Roth, John Wiley & Sons 2005
Introduction to Autonomous Mobile Robots, Roland Siegwart, Illah R. Nourbakhsh, MIT Press 2004
Systems Analysis and Design (Shelly Cashman Series), Gary B. Shelly, Thomas J. Cashman, Steven G. Forsythe, Harry J. Rosenblatt, Course Technology Inc, 2005

Specific project theme references

Teaching Methods

Development of an engineering project comprising the phases: requirements analysis, project design and implementation. The necessary technical documentation is also developed.

Assessment methods

The assessment will be performed though the evaluation of the final project presentation (prototype and documentation) along with partial evaluation of the requirements analysis and solution design phases.

	Name
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Lecturer:	Alfredo Manuel Oliveira Martins (AOM) Eduardo Alexandre Pereira da Silva (EPS) José Miguel Soares de Almeida (JSA) Luis Miguel Vieira Lima (LUL)