

## SENSORS FOR INDUSTRIAL NETWORKS

### 1.1. Identification

University:	Universidad Politécnica de Valencia											
School:	Escuela Técnica Superior de Ingeniería del Diseño											
Course:	Sensors for Industrial Networks											
ECTS:	3											
Semester:	<i>Winter</i>					<i>Summer</i>					X	
Category	<i>Fundamental course</i>						<i>Specialisation course</i>					X
Module	<i>MFI</i>		<i>MFII</i>		<i>MFIII</i>		<i>MSI</i>		<i>MSII</i>		<i>MSIII</i>	X
Teachers:	Jose Pelegrí											
Language:	<i>English</i>	X	<i>Italian</i>		<i>Swedish</i>		<i>Spanish</i>					

### 1.2. Learning-outcomes

- knowledge about the fundamentals of sensors industrial networks.

### 1.3. Competencies

#### ▪ General

- to have critical understanding of technical and scientific tools
- to work and manage teams
- communication skills (both written and oral)
- to work in an international context

#### ▪ Specific

- to analyse the networks of sensors.
- to understand the techniques of location in NS

### 1.4. Contents

Networks of sensors (NS) and radio networks of sensors (NS). Techniques of location in NS. Algorithms of work. Mechanisms of NS establishment. Management of the NS resources. Techniques of modeled of NS. Real implementation and applications.

### **1.5. Teaching Methodology**

- Lecture sessions
- Practical sessions: “cooperative work” for solving problems
- laboratory sessions

### **1.6. Evaluation**

- written exams
- oral evaluation of the problems solved by “cooperative work”
- oral evaluation of laboratory work

### **1.7. Bibliography**

- Steven Strauss, S Iyengar Sitharama Iyengar, Brooks R R, IYENGAR S SITHARAMA “Distributed Sensor Networks”. CRC press.
- Rajeev (EDT) Shorey “Mobile, Wireless, and Sensor Networks: Technology, Applications And Future Directions”. Wiley-interscience.