

Centre	University College of Engineering of Vitoria-Gasteiz
Name of subject	25997 – Electronic Technology
Qualification	Degree in Industrial Electronic Engineering and Automatics
Type	Compulsory
Credits	6 ECTS
Year	3
Term(s)	1st
Department	Electronic Technology
Language	Spanish

Outcomes / Objectives

Criteria for selecting and using electronic devices. Manufacturing and design techniques

Syllabus

1. Passive electronic components. Description and characteristics of linear fixed and variable resistors, non-linear resistors (thermistors, LDR, VDR...), fixed and variable condensers.
2. Optoelectronics.
3. Design and manufacture of printed circuit boards. Printed circuit board manufacturing technologies. Printed circuit board design rules. Design guidelines. Design software tools.
4. Sensors. Description, characteristics and operation of common industrial sensors (temperature, pressure, level, flow, rate, position, displacement...)

Methodology

Teaching Method

Face-to-Face Teaching Hours

Lectures	Seminars	Classroom practice	Lab. practice	Computer sessions	Clinical practice	Workshops	Industrial workshops	Field practice
39		6	15					

Student Hours of Non Face-To-Face Activities

Lectures	Seminars	Classroom practice	Lab. practice	Computer sessions	Clinical practice	Workshops	Industrial workshops	Field practice
60		10	20					

Assessment System

- Written essay exam
- Practical tasks (exercises, case studies or problems)
- Group assignments

Bibliography

Basic Bibliography

1. Teacher notes.
2. Materiales y componentes pasivos. R. Álvarez Santos. Ed. Ciencia 3 S.A. Madrid. 1990
3. Materiales y componentes activos. R. Álvarez Santos. Ed. Ciencia 3 S.A. Madrid. 1992
4. Componentes Electrónicos. Varios. Servicio de publicaciones de la Universidad de Alcalá de Henares. Sensores y acondicionadores de señal. Ramón Pallàs Areny. Marcombo. 1994
5. Circuitos impresos. Teoría, diseño y montaje. J. González Calabuig, M^a A. Recasens Bellver. Paraninfo. 1997

In-depth Bibliography

1. Características de fabricante de componentes pasivos.
2. Características de fabricante de sensores.
3. Sistemas de instrumentación. Varios. Servicio de publicaciones de la Universidad de Alcalá de Henares. 1994
4. Adquisición y distribución de señales. Ramón Pallàs Areny. Marcombo. 1993
5. EMI control in the design of printed circuit boards and backplanes. Donald R. J. White. Don White Consultants, Inc. 1982

Magazines

1. Elektor
2. Eurofach electrónica. Goodman Business. Madrid
3. Revista española de electrónica. REDE. Barcelona

Websites

- Moodle course page