

Centre	University College of Engineering of Vitoria-Gasteiz
Name of subject	25992 – Analogue Electronics
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

Passive and active devices. Electronic components. Analogue systems (calculation and design)

Syllabus

Differential amplifiers. Structure. General characteristics. Ideal operational amplifier. Characteristics. Linear circuits. Non-linear circuits. Actual operational amplifier. Practical limitations of op-amps. Manufacturer characteristics. Influence of actual characteristics on different circuits. Frequency response. Cutoff frequencies. Bode plots. Dominant poles. Low frequency study. High frequency study. Multistage circuits. Feedback. Positive feedback and negative feedback. Properties of current-feedback amplifiers. Topologies. Stability. Linear power supplies. Rectification, filters. Stabilised power supplies. Regulated power supplies. Integrated voltage regulators. Dissipators

Methodology

Teaching Method

Face-to-Face Teaching Hours

Lectures	Seminars	Classroom practice	Lab. practice	Computer sessions	Clinical practice	Workshops	Industrial workshops	Field practice
45			15					

Student Hours of Non Face-To-Face Activities

Lectures	Seminars	Classroom practice	Lab. practice	Computer sessions	Clinical practice	Workshops	Industrial workshops	Field practice
70			20					

Assessment System

General criteria

Clarification regarding assessment

Bibliography

Basic Bibliography

- MUÑOZ MERINO, E. Circuitos electrónicos digitales I. ETSI Telecomunicaciones. Madrid.
- MUÑOZ MERINO, E. Circuitos electrónicos digitales II. ETSI Telecomunicaciones. Madrid.
- RASHID, MUHAMMAD H. Circuitos microelectrónicos: análisis y diseño. Thomson. Madrid

In-depth Bibliography

- PÉREZ GONZÁLEZ, F. Problemas de electrónica analógica. EUIT de Telecomunicaciones. Madrid.
- MALIK, N. R. Circuitos electrónicos. Prentice Hall.
- SAVANT, C.J. Jr. Diseño electrónico. Addison-Wesley Iberoamericana.
- SCHILLING, D. L. Circuitos electrónicos. McGraw-Hill.

Websites

- <http://www.national.com/analog>
- <http://www.analog.com/>
- <http://www.cirrus.com/en/>
- <http://www.ti.com/>