

Course guide

330248 - TD - Data Transmission

Last modified: 04/05/2023

Unit in charge: Manresa School of Engineering
Teaching unit: 750 - EMIT - Department of Mining, Industrial and ICT Engineering.
Degree: BACHELOR'S DEGREE IN ICT SYSTEMS ENGINEERING (Syllabus 2010). (Optional subject).
Academic year: 2023 **ECTS Credits:** 6.0 **Languages:** Catalan, English

LECTURER

Coordinating lecturer: JOSE FONT TEIXIDO

Others:

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

1. The ability to perform the typical activities of the degree, taking into account the corresponding standards, rules and regulations.
2. Ability to model and simulate systems in the field of the degree and apply the results to problem solving within this field.

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

STUDY LOAD

Type	Hours	Percentage
Self study	90,0	60.00
Hours large group	30,0	20.00
Hours small group	30,0	20.00

Total learning time: 150 h

CONTENTS

(ENG) Título del contenido 1: CONCEPTOS PREVIOS PARA LA TRANSMISIÓN DE DATOS

Full-or-part-time: 22h 30m

Theory classes: 4h 30m

Practical classes: 4h 30m

Self study : 13h 30m

(ENG) Título del contenido 2: LA SEÑAL MUESTREADA

Full-or-part-time: 15h

Theory classes: 3h

Practical classes: 3h

Self study : 9h

(ENG) Título del contenido 3: TRANSMISIÓN DIGITAL EN BANDA BASE

Full-or-part-time: 30h

Theory classes: 6h

Practical classes: 6h

Self study : 18h

(ENG) Título del contenido 4: RUIDO Y ERRORES

Full-or-part-time: 30h

Theory classes: 6h

Practical classes: 6h

Self study : 18h

(ENG) Título del contenido 5: ESPACIO DE LA SEÑAL

Full-or-part-time: 22h 30m

Theory classes: 4h 30m

Practical classes: 4h 30m

Self study : 13h 30m

(ENG) Título del contenido 6: SISTEMAS DE MODULACIÓN DIGITAL

Full-or-part-time: 30h

Theory classes: 6h

Practical classes: 6h

Self study : 18h

ACTIVITIES

(ENG) TÍTULO DE LA ACTIVIDAD 1: CLASE EXPOSITIVA

Full-or-part-time: 25h

Theory classes: 25h

(ENG) TÍTULO DE LA ACTIVIDAD 2: ESTUDIO DE CONTENIDOS

Full-or-part-time: 30h

Self study: 30h



(ENG) TÍTULO DE LA ACTIVIDAD 3: CLASE DE PRACTICAS

Full-or-part-time: 60h

Practical classes: 30h

Self study: 30h

(ENG) TÍTULO DE LA ACTIVIDAD 4: REALIZACIÓN DE EJERCICIOS

Full-or-part-time: 20h

Self study: 20h

(ENG) TÍTULO DE LA ACTIVIDAD 5: EXAMEN

Full-or-part-time: 15h

Theory classes: 5h

Self study: 10h

GRADING SYSTEM

BIBLIOGRAPHY

Basic:

- Roden, Martin S. Analog and digital communication systems. 4th ed. Upper Saddle River: Prentice Hall, 1996. ISBN 0133720462.
- Carlson, A. Bruce. Communication systems: an introduction to signals and noise in electrical communication. 3rd ed. New York: McGraw-Hill, 1986. ISBN 007009960X.
- Sklar, Bernard. Digital communications: fundamentals and applications [on line]. 2nd ed. Upper Saddle River: Prentice Hall, 2001 [Consultation : 31/05/2022]. Available on : <https://ebookcentral-proquest-com.recursos.biblioteca.upc.edu/lib/upcatalunya-ebooks/detail.action?docID=5185638>. ISBN 0130847887.
- Artés Rodríguez, Antonio, i altres. Comunicaciones digitales. Madrid: Pearson Educación/Prentice Hall, 2007. ISBN 9788483223482.