



## Course guide

### 230334 - ELEAUTO - Automotive Electronic Systems

Last modified: 24/05/2024

**Unit in charge:** Barcelona School of Telecommunications Engineering  
**Teaching unit:** 710 - EEL - Department of Electronic Engineering.

**Degree:** BACHELOR'S DEGREE IN TELECOMMUNICATIONS TECHNOLOGIES AND SERVICES ENGINEERING (Syllabus 2015). (Optional subject).  
BACHELOR'S DEGREE IN ELECTRONIC ENGINEERING AND TELECOMMUNICATION (Syllabus 2018). (Optional subject).

**Academic year:** 2024 **ECTS Credits:** 2.0 **Languages:** Catalan

#### LECTURER

**Coordinating lecturer:** FERNANDO SILVA MARTINEZ

**Others:** Segon quadrimestre:  
FERNANDO SILVA MARTINEZ - 10

#### TEACHING METHODOLOGY

Group work  
Oral presentation

#### LEARNING OBJECTIVES OF THE SUBJECT

Analyze the electronic systems that incorporate current cars, study their particular technical requirements and learn about the new applications that are currently being developed for future cars.

#### STUDY LOAD

Type	Hours	Percentage
Self study	30,0	60.00
Hours large group	20,0	40.00

**Total learning time:** 50 h

#### CONTENTS

##### Theory lessons

**Description:**

Introduction to automotive electronics  
Automotive communication systems  
Autonomous vehicles  
Automotive electronics requirements

**Full-or-part-time:** 13h

Theory classes: 13h



### Works and presentations

**Description:**

Theoretical work on an electronic system of a current vehicle  
Theoretical work on a future autonomous vehicle system

**Full-or-part-time:** 37h

Practical classes: 5h

Guided activities: 2h

Self study : 30h

### GRADING SYSTEM

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Work reports 70%

Oral presentations 30%

### BIBLIOGRAPHY

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**Basic:**

- Denton, Tom. Automobile electrical and electronic systems. Fifth edition. Milton Park, Abingdon, Oxon: Routledge, [2017]. ISBN 9780415725774.

- Ribbens, William B. Understanding automotive electronics : an engineering perspective [on line]. 8th ed. Amsterdam [etc.]: Newnes, [2017] [ Consultation : 21/06/2023 ]. Available on : <https://ebookcentral-proquest-com.recursos.biblioteca.upc.edu/lib/upcatalunya-ebooks/detail.action?pq-origsite=primo&docID=4882541>. ISBN 9780128104347.