

## Course Unit Description - (ELETE)

(Telecommunication Electronics)

(Mestrado em Engenharia Electrotécnica e de Computadores)

Academic year: 2009/2010



### Subject group: Electrónica e Telecomunicações

	Semestral	Compulsory	
Mode of study	Diurno	Hours/Week	T-Teórica 2
Year	1 <sup>o</sup>		PL-Prática-Laboratorial 2
Semester	1 <sup>o</sup>		OT-Orientação Tutorial 1

ECTS 6

### Objectives

This course is in radio frequency area and the prerequisites are in areas of electrical engineering and electronics.

### Course Contents

- Communication systems
- Transmission lines
- Matching circuits and filters
- High frequency amplifiers
- Power amplifiers
- Oscillators
- Mixers
- Modulation and demodulation circuits
- Radio receivers
- Super-heterodyne receptors
- Phase-lock loops
- Frequency synthesizers
- Software defined radio

### Recommended reading

G. M. Miller e J. S. Beasley, "Modern Electronic Communication", Prentice Hall, 2002.  
Frenzel, "Communication Electronics", McGraw-Hill, 1994.  
Kennedy, Davis "Electronic Communication Systems", McGraw-Hill, 1992.  
Lectures of the course

### Teaching Methods

Expositive and interrogative methods in lessons and whenever adequate active methods like brainstorm and cases study.

In lab lessons demonstrative and group work are the methods used.

### Assessment methods

During the semester, we have lab work with 30% of the final mark and a minimum of 6 in 20.

At the final of the course we have a final examination with 70% of the final mark and a minimum of 8 in 20.

	<b>Name</b>
<b>Teacher responsible:</b>	Sergio Ferraz de Sousa Santos (SFS)
<b>Lecturer:</b>	Sergio Ferraz de Sousa Santos (SFS)

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