

Experimental Electronics

Instructor: Lucio Scucchia

Course Format: 4 Hours Lecture (15 lectures)

Period: Winter Semester

Language: English

Recommended Previous Knowledge:

Good knowledge in electrical circuit analysis.

Knowledge on analogue electronics.

Contents:

In the lectures, the student will be introduced to the use of laboratory measuring instruments (multimeter, power supply, signal generator, oscilloscope). Successively, the student will learn to design some important analogue electronic subsystems as: small-signal amplifiers, power amplifiers, sinusoidal and relaxation oscillators. Finally, some important integrated circuits (operational amplifier, voltage regulator and the timer integrated circuit) will be introduced.

The course is based on the realization of several laboratory experiments.

Learning Outcomes:

Learning to synthesize the fundamental analogue electronic subsystems

Learning practical aspects concerning:

- measuring instruments,
- assembly of circuits and
- limits of the most common components and integrated circuits.

Reading Resources:

Neil Storey, "ELECTRONICS: a system approach," 4th edition, Pub. by Prentice Hall

Additional didactic material on <http://didattica.uniroma2.it/informazioni/index/insegnamento/144622-Experimental-Electronics>

Performance Record: Laboratory test and oral examination.

Workload: 60 hours total.

Further Information: <http://www.engineering-sciences.uniroma2.it/MENU/HOME/Home.html>

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