Faculty of Sciences

PHYS2903   Red time Data acquisition and digital electronics

[22.5h] 3 credits

This course is taught in the 1st semester

Teacher(s):	René Prieels
Language:	French
Level:	Second cycle

Aims

The objective of this course is to give the student the necessary formation to understand how to perform with a computer the acquisition of data from external electronic modules linked to an experimental set-up.

Main themes

The student will need to master the whole instruction's spatio-temporal evolution within computers. He will learn the interface functions and properties, and several external transfer protocols. He will see the links and the coherence in an acquisition chain made of sensors, signals, coding, transfer and controls. The theoretical lectures will be complemented with the hardware and software developments of an acquisition card build in the framework of the course PHYS 2905 (20hrs). The lectures PHYS 2903 and the laboratory sessions PHYS 2905 are interconnected

Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

Prerequisites: basics in electronics.
Support: A syllabus is available.
Openings: in the computer sector of industry, at the frontier between computers and the outside world. Key function in synthesis and as well as temporal and spacial analyse.
A part (20h) of the laboratory PHYS 2905 is a useful complement of this course via concrete applications. The laboratory is given in synchronization during the same semester.

Other credits in programs

PHYS22/A	Deuxième licence en sciences physiques (Physique appliquée)	(3 credits)	Mandatory
PHYS22/G	Deuxième licence en sciences physiques	(3 credits)	