ELEC2103 Project in Electricity 3 : Electronic systems

[90h] 6 credits

This course is taught in the 1st and 2nd semester

Teacher(s):	Jean-Didier Legat, Luc Vandendorpe
Language:	French
Level:	Second cycle

Aims

After this course the students will be able to :
- design, simulate and test a telecommunication system
- design, simulate and test an electronic system based on FPGA, a microcontroller and an analog part used for implementing the telecommunication system

Main themes

The project consists in designing, implementing on an appropriate hardware, simulating and testing a telecommunication system

Content and teaching methods

Teaching methods :
Design a telecommunication system on the basis of given specifications
Modelling and simulation of the system
Design, synthesis and simulation of a digital electronic system including FSM, counters, registers, interface
Implementation of the system in a FPGA
Use and programming of a microcontroller
Design and spice simulation of the analog part of the telecommunication system
Realization and test of the whole system

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

Prerequisites :
The following courses will be taken in parallel with the project : Telecommunications (ELEC2795); Control electronics (ELEC2660); Electronics I (ELEC2531), Electronics 2 (ELEC2532).
Assessment :
The evaluation will be based on various elements : the work during the year, the final demonstration at the end of the project, the final report, the final presentation. No other presentation during the examination periods.
Observation :
This project is carried out by groups of 3 to 4 students
For more information:
http://www.dice.ucl.ac.be/~jdl/InfoCours/InfoCours.htm

Other credits in programs

ELEC22	Deuxième année du programme conduisant au grade d'ingénieur civil électricien	(6 credits)	Mandatory
ELME22/M	Deuxième année du programme conduisant au grade d'ingénieur civil électro-mécanicien (mécatronique)	(6 credits)	Mandatory