



Faculté des sciences appliquées

FSA

ELEC2103 PROJECT IN ELECTRICITY III : ELECTRONIC SYSTEMS

[90h] 6 credits

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

Teacher(s): Damien Grenier, Jean-Didier Legat, Luc Vandendorpe
Language: french
Level: 2nd cycle course

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 (ELEC2661); 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

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| 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 |