LELEC2531

2010-2011

Electronics II : Digital electronic circuits

5.0 credits	30.0 h + 30.0 h	1q

Teacher(s) :	Legat Jean-Didier ;
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	Identical to the contents of the course
Aims :	The aim of the course is to study in-depth standard digital integrated circuits (such as Boolean gates, flip-flops, registers, finite-state machines, memories, ...) including the design, simulation and synthesis aspects. This course will also present the architecture of standard microcontrollers. *The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".*
Content :	1) Standard digital circuits - combinatorial circuits - implementation - sequential circuits (Flip-flops, counters, FSM) - VHDL : synthesis and simulation 2) Microcontrollers - architecture - periperals - assembler programming 3) Integrated digital circuits - spice models - MOS digital circuits (NMOS, CMOS) - bipolar digital circuits (TTL, ECL, BiCMOS) - memories (ROM, SRAM, DRAM)
Other infos :	Prerequisites ELEC1530 : Electronics I Assessment Oral examination on the theoretical part of the lectures (slides seen during the lectures), and on the making of one or two digital electronic circuits Bibliography Supporting materials : in english. Moreover, extra tutorials in english are organized for non french speaking students.
Cycle and year of study :	> Master [120] in Electrical Engineering > Master [120] in Electro-mechanical Engineering > Master [120] in Biomedical Engineering
Faculty or entity in charge:	ELEC