

6 credits

30.0 h + 30.0 h

Q2

Teacher(s)	Legat Jean-Didier ;
Language :	French
Place of the course	Louvain-la-Neuve
Main themes	<ul style="list-style-type: none"> • Fundamental laws of electricity electrostatics, magnetism • Electrical circuits (Sources, Kirchhoff laws, ...) • Simulation of electrical circuits using appropriate software (eg Spice) • MOS transistor • Logic gates and their implementation in MOS (combinational circuits and sequential circuits based) • memory points (SRAM, DRAM, Flash)
Aims	<p>Given the learning outcomes of the "Bachelor in Engineering" program, this course contributes to the development, acquisition and evaluation of the following learning outcomes:</p> <ul style="list-style-type: none"> • S1.G4 • S2.2, S2.4 <p>Students completing this course successfully will be able to</p> <ol style="list-style-type: none"> 1 <ul style="list-style-type: none"> • explain the basic laws of electricity and electrical circuits • solve simple electrical circuits using wisely the fundamental laws • simulate simple circuits using a software and interpret the results • characterize simple electrical circuits by explaining their operation • explain the operation of the MOS transistor as a logic switch • describe , from the combination of MOS transistors , the opening and implementation of basic logic gates and the main memory points <p>-----</p> <p><i>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".</i></p>
Evaluation methods	The methods of assessment are defined on the course website on Moodle.
Inline resources	http://moodleucl.uclouvain.be/course/view.php?id=4333
Other infos	This course assume you get basic knowledge in physics and mathematics from secondary school.
Faculty or entity in charge	INFO

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Bachelor in Computer Science	SINF1BA	6		