

5.0 credits	30.0 h + 30.0 h	2q
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Teacher(s) :	Legat Jean-Didier ; Flandre Denis ;
Language :	Français
Place of the course	Louvain-la-Neuve
Prerequisites :	LELEC1530 - Basic analog and digital electronic circuits
Main themes :	Identical to description
Aims :	<p>During this activity, the students will be given the opportunity</p> <p>--</p> <p>to discover the main classes of application electronic circuits such as operational amplifiers, voltage references, A/D and D/A converters, oscillators, mixers, phase locked loops, etc.</p> <p>--</p> <p>to analyse the architecture, to understand the behaviour, and to determine, to compute and to simulate the characteristics of these circuits</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 evaluation is based on a written examination on the theoretical part of the course and exercises.
Teaching methods :	Learning is based on courses and exercises sessions
Content :	General purpose analog circuits CMOS operational amplifier Output stages Signal generation Noise D/A and A/D converters Telecommunication circuits Active Oscillators Mixers Phase locked loops
Bibliography :	<p>--</p> <p>Analysis and design of analog integrated circuits, Gray, Hurst, Lewis and Meyer, John Wiley 2001</p> <p>--</p> <p>CMOS Circuit Design, Layout and Simulation, 3rd edition (IEEE Press Series on Microelectronic Systems) by R. Jacob Baker</p> <p>--</p> <p>CMOS : Mixed-Signal Circuit Design, 2nd edition by R. Jacob Baker</p> <p>--</p> <p>Microelectronic Circuits by Sedra/Smith - Oxford University Press</p>
Cycle and year of study :	<p>> Master [120] in Electrical Engineering</p> <p>> Master [120] in Electro-mechanical Engineering</p>
Faculty or entity in charge:	ELEC