LELEC2660

2010-2011

Power electronics

4.0 credits	30.0 h + 15.0 h	1q

Teacher(s) :	Labrique Francis ;
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	Identical to the contents of the course
Aims :	This course is devoted to the analysis of power electronic converters and to their application to motor control and power management in electrical networks. *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 :	- Main types of power semiconductors - Basic structure and working principle of power electronic converters - DC-DC, AC-DE, DC-AC and AC-AC converters - Application to motor control and power management in electrical networks - Dynamical modelling and control of power electronic converters as part of automatic systems. Design and realization of power electronic converters in the frame of the project in Mechatronics Study and simulation of a power electronic converter.
Other infos :	Prerequisites : ELEC1370 : Measurements and electrical circuits Assessment : Exam during the session + assessment on the practical works during the year Support : This lecture refers to : G. Seguier, R. Bausière, F. Labrique : Electronique de puissance, éd. Dunod
Cycle and year of study :	> Master [120] in Electrical Engineering > Master [120] in Electro-mechanical Engineering
Faculty or entity in charge:	ELEC