UCL Université catholique de Louvain

LELEC2753

2010-2011

POWER ELECTRICAL ENGINEERING

5.0 credits	30.0 h + 15.0 h	2q

Teacher(s) :	Labrique Francis ; Matagne Ernest ;
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	Identical to the contents of the course
Aims :	Conversion of electrical power is essential in production, transmission and utilization of electricity. The aim of the course is to pmrovide a basis understanding of the principles involved in the working of most widespread electrical and electromechanical converters. Examples of applications are presented. *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 Static converters - transformers - power electronic converters : rectifiers, choppers, inverters 2 Electomechanical converters - principles of electromechanical conversion - rotating field converters : induction and synchronous machines - direct current machines - stepping and reluctance motors I 3 Applications - production and transmission of electrical power - variable speed drives
Other infos :	Prerequisites : Basic knowledge in electricity and mechanics Contents and methods : The course is based on lectures completed by exercices and practical laboratory training Support : A course text and transparencies are available in french Bibliographic reference : "Electromécanique : Convertisseurs d'énergie et actionneurs", H. Buyse, D. Grenier, F. Labrique, E. Matagne, Dunod 2001
Cycle and year of study :	> Master [120] in Mechanical Engineering > Master [120] in Biomedical Engineering
Faculty or entity in charge:	ELEC