Faculty of Applied Sciences

ELEC1102   PROJECT IN ELECTRICITY 2 : PHYSICS OF ELECTRICITY

[+45h exercises] 3 credits

This course is not taught in 2005-2006
This course is taught in the 1st semester
Language: French
Level: First cycle

Aims

After this course the students will be able to :
- understand and model an electrical phenomenon
- simulate this phenomenon using a numerical software

Main themes

Identical to the contents of the course

Content and teaching methods

This project consists of a detailed electrical analysis of a physical phenomenon, such as an electromagnetic transmission problem, an electric or magnetic field distribution or a p-n junction, and the development of a model for this phenomenon. The second phase of the project consists in using an of the shelf software to simulate the phenomenon and validate the model.
Teaching method :
- a bibliographical study based on the description of the problem
- an in depth understanding of the physical phenomenon
- a modelisation of the problem
- the implementation of the model in the chosen software
- test and validation of the model, using the software

Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

Prerequisite :
Physical electronics (ELEC2330),
Electromagnetics (ELEC2350),
Electricity : advanced topics (ELEC2755),
or equivalent
Observation :
This project is carried out by groups of 3 to 4 students
Assessment :
The evaluation of the students will be based on various elements : the work during the semester, the final demonstration, the interim reports and the final report, the final presentation.