AUCE1901 Confort et Physique du bâtiment (thermique, acoustique et éclairage)

[30h] 3 credits

This course is not taught in 2005-2006
This course is taught in the 2nd semester

Teacher(s): Marcelo Blasco, André De Herde, Elisabeth Gratia
Language: French
Level: First cycle

Aims

Understanding basic physical concepts for controlling atmosphere and comfort (thermal, acoustic, air quality, visual)

Main themes

Physical and physiological parameters of thermal, acoustic and visual comfort
Air pollutants and air quality level
Climatic data
Means of heat transfers in buildings
Hygrothermics
Ventilation of buildings
Means of propagation of sound
Soundproofing criteria
Static and dynamic approach to phenomena
Typology of models and digital modelization
Concepts of climatic architecture with examples

Content and teaching methods

The design and construction of a building that totally or partially meets the occupants' expectations for comfort. Starting with those expectations, the course goes into the physical aspects of heat transfers and propagation of sound. In addition, a section is reserved for natural ventilation and basic notions of the use of natural lighting.
To a large extent, the course material is accessible in electronic form; the teaching method enables interested students to go into it in greater depth in interaction with the teachers.

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

Prerequisites:
Course in thermodynamics
Evaluation:
The evaluation is done by an examination in French or in English.