Turbomachinery

Lecturer
Patrick HENDRICK (Coordinator)

Course mnemonic
MECA-H402

ECTS credits
5 credits

Language(s) of instruction
English

Course period
Second term

Course content

Study of incompressible and compressible flow turbomachinery (pumps, centrifugal and axial compressors, radial and axial turbines)

Objectives (and/or specific learning outcomes)

Understand the physics of the different rotating machines used to deliver energy to a fluid or extract its energy towards a shaft

Teaching method and learning activities

Theory + exercises + practical demo's

Contribution to the teaching profile

This teaching unit contributes to the following competences:

- In-depth knowledge and understanding of exact sciences with the specificity of their application to engineering
- Reformulate complex engineering problems in order to solve them (simplifying assumptions, reducing complexity)
- Conceive, plan and execute a research project, based on an analysis of its objectives, existing knowledge and the relevant literature, with attention to innovation and valorization in industry and society
- Correctly report on research or design results in the form of a technical report or in the form of a scientific paper
- Present and defend results in a scientifically sound way, using contemporary communication tools, for a national as well as for an international professional or lay audience
- Collaborate in a (multidisciplinary) team
- Has a broad scientific knowledge, understanding and skills to be able to design, produce and maintain complex mechanical, electrical and/or energy systems with a focus on products, systems and services.
- Has an in depth scientific knowledge, understanding and skills in at least one of the subfields needed to design, produce, apply and maintain complex mechanical, electrical and/or energy systems;
- Has an in-depth understanding of safety standards and rules with respect to mechanical, electrical and energy systems.

Other information

Contact(s)

Patrick HENDRICK Tél. : 02/650 26 58 Email : Patrick.hendrick@ulb.ac.be

Evaluation method(s)

Other

Programmes

Programmes proposing this course at the Brussels School of Engineering

MA-IREM | Master of science in Electromechanical Engineering | finalité Professional/unit 1 and finalité Operations engineering and management/unit 1