

Aircraft conceptual design

Lecturer

Axel Coussement (Coordinator)

Course mnemonic

MECA-H508

ECTS credits

5 credits

Language(s) of instruction

English

Course period

Second term

Course content

Conceptual aircraft design methodology and practical application to aircraft or unmanned aerial vehicle sizing

Objectives (and/or specific learning outcomes)

Understand the methodology of aircraft conceptual design and sizing and the influence of the different parameters

Pre-requisites and co-requisites

Pre-requisites courses

MECA-Y003 | Aircraft structures | 4 crédits

Teaching method and learning activities

Theory + application on a case study + seminars with invited speakers

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
- › In-depth knowledge and understanding of integrated structural design methods in the framework of a global design strategy
- › In-depth knowledge and understanding of the advanced methods and theories to schematize and model complex problems or processes
- › 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
- › 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 understanding of safety standards and rules with respect to mechanical, electrical and energy systems.

References, bibliography and recommended reading

Corke + D. Raymer

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 2