INGÉNIERIE MÉCANIQUE

MECHANICAL ENGINEERING

Lecturers: Olivier DESSOMBZ, Jean-Jacques SINOU

| Lecturers : 4.0 | TC : 4.0 | PW : 0.0 | Autonomy : 16.0 | Study : 24.0 | Project : 0.0 | Language : FR

Objectives

Study the design of mechanical systems and structures present in various fields of application (engineering civil, aeronautical, automotive...) by linking technological, static and dynamic aspects.

Keywords : Design, methodology and modelling

Programme

Course / TD program :
- Introduction to the dimensioning issue.
- Dynamic sizing.

Synthesis Studies:
- Two studies make it possible to show the existing links between the different aspects of the dimensioning of a system or a mechanical structure.
- Examples of themes addressed: sizing of a bridge, dimensioning of a lifting clamp, sizing of an automotive clutch, sizing of a wind turbine.

Learning outcomes

Independent study

Objectifs : Work on BE, formatting of results and writing.

Méhodes : Study of the systems offered in BE, preparation of evaluation presentations.

Core texts

Georges Spinnler, *CONCEPTION DES MACHINES, TOMES 1, 2 & 3*, Presses polytechniques et universitaires romandes, 1997
Daniel Gay & Jacques Gambelin *DIMENSIONNEMENT DES STRUCTURES, UNE INTRODUCTION*, Hermès science publications, 1999
Claude Chèze*DIMENSIONNEMENT DES STRUCTURES*, Ellipses, 2012

Assessment

Score = 50% knowledge + 50% know-how
Knowledge score = 100% terminal exam
Know-how score = 100% continuous assessment