



CONCEPTION DE MÉCANISME

MECHANICAL DESIGN

Lecturers: **Didier LACOUR**

| Lecturers : 4.0 | TC : 4.0 | PW : 0.0 | Autonomy : 0.0 | Study : 12.0 | Project : 0.0 | Language : FR

Objectives

Knowledge and dimensioning of power transmission elements, particularly those used in ground transport, understand their operation and analyse their performance.

Keywords : power transmission, gearbox, vehicle, hydraulics transmission

Programme

- Elements of technology for power transmission.
- Epicyclic trains and applications.
- Gearboxes and drives.
- Hydraulics transmissions.
- Hybrid vehicle architectures.
- Three 4h studies: Analysis of the operation of a DSG7 gearbox. Simulation of the operation of a gearbox and a DPC differential (with Catia software and applications). Analysis of the power transmission system of a 4x4 vehicle

Learning outcomes

- Be able to perform functional analysis of a mechanical transmission system.
- Be able to analyse and simulate the operation of a mechanical transmission system

Independent study

Objectifs : This activity is not concerned with framed autonomy activities outside personal work.

Méthodes : This activity is not concerned with framed autonomy activities outside personal work.

Core texts

Esnault F., *CONSTRUCTION MÉCANIQUE, TOME 1*, Dunod, 2009
Esnault F. *CONSTRUCTION MÉCANIQUE, TOME 2*, Dunod, 2009
Esnault F. *CONSTRUCTION MÉCANIQUE, TOME 3*, Dunod, 2009

Assessment

Final mark = 100% Know-how
Know-how mark = 100% continuous assessment