MAQUETTAGE NUMÉRIQUE

DIGITAL MOCK-UP

Lecturers: **Didier LACOUR**

| Lecturers : 2.0 | TC : 0.0 | PW : 0.0 | Autonomy : 4.0 | Study : 14.0 | Project : 0.0 | Language : FR

Objectives

The aim of this training course is to enable engineers to understand the various aspects of digital modelling (volume and surface modelling, integration with simulation (kinematics, calculation, manufacturing, etc.), which are necessary in particular for other training Two Mechanical and Mechanical Engineering Units of Solids and Structures.

Keywords : Digital Mock-Up, Numerical modelling, Simulation, Finite element calculations, PLM, Bézier surfaces, Modelling curves and surfaces

Programme	- Mathematical modeling of pole surfaces. - Getting Started with the Catia V5 Software (Part Design). - Surface modeling with Catia V5. - Information about the 100% web-based Onshape solution. - Mini-project: Implementation of modeling, simulation and calculation tools on a concrete problem of design or optimization of a technical system.
Learning outcomes	• Be able to model a technical solution using computer tools • Know how to manipulate current modelling and simulation tools • To be able to understand all the scientific and technical aspects of a project • Knowing the software tools of numerical modelling used in industry.
Independent study	Objectifs : Objectives: Develop and deepen the subject of the mini-project. Methods: CAD sessions with teacher assistance. Méhodes :
Core texts	Pierre Bezier, *L'UTILISATION DES COURBES ET SURFACES EN CAO*, Hermes Sciences Publicat, 1988 Jean-Claude Fiorot *COURBES ET SURFACES RATIONNELLES - APPLICATIONS À LA CAO*, Dunod, 1989 Dassault Systemes*MANUEL UTILISATION CATIA V5*, Dassault Systemes, 2020
Assessment	Final mark = 100% Know-how Know-how mark = 100% continuous assessment