

## Computer Aided Design

### Design and analysis of mechanical systems

#### IDENTIFICATION

CODE : GM-3-S1-EC-CONAN  
ECTS : 3.0

#### HOURS

Lectures : 10.0 h  
Seminars : 24.0 h  
Laboratory : 8.0 h  
Project : 0.0 h  
Teacher-student  
contact : 42.0 h  
Personal work : 42.0 h  
Total : 84.0 h

#### ASSESSMENT METHOD

#### TEACHING AIDS

#### TEACHING LANGUAGE

French

#### CONTACT

Unknown

#### AIMS

- Achieve a minimum technological culture [vocabulary, guidance and assembly elements].
- ¿- Master technical communication tools [reading drawings, kinematic diagrams, viewing in a CAD reader].¿- be able to implement a design approach based on the specifications provided¿- be able to select components according to given constraints¿- Estimate the ecological impact of a part based on the design choices made.

#### CONTENT

- "\* Reading of assembly drawings / analysis of digital models;
- \* Technological culture; Calculation diagrams; Kinematic diagrams; Isostatism / hyperstatism of mechanisms; Design of a pivot link, of a sliding link; Technical analysis of a mechanism from the real system;
- \* Geometric Product Specification GPS Concept; Knowledge and reading of ISO dimensional, geometric and dimensional, geometric and surface finish dimensions; plan reading, specification analysis for mechanical manufacturing or product quality control.
- \* Use of CAD software to manipulate digital models, extract geometric features [dimensions, surfaces, volumes], create drawings, create simple parts and assemblies.
- \* Use rulers or software to estimate the ecological impact of a part."

#### PRE-REQUISITE

- "\* Knowledge of CAD software: opening and manipulating a digital model
- \* Reading technical drawings [layout]
- \* Force calculations [Torsors, Fundamental Principle of Dynamics]"

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