

Experimental approaches

Computational and experimental modeling

IDENTIFICATION

CODE : GM-4-S2-EC-MEMNE
ECTS : 3.0

HOURS

Lectures :	0.0 h
Seminars :	0.0 h
Laboratory :	48.0 h
Project :	0.0 h
Teacher-student contact :	48.0 h
Personal work :	20.0 h
Total :	68.0 h

ASSESSMENT METHOD

1 synthetic oral defense
[synthesizing the work of the 4
sessions of a theme] / 1 synthesis
report [synthesizing the work of the
4 sessions of a theme] / 4 fiches [for
sessions not subject to a Defense or
report]

TEACHING AIDS

TEACHING LANGUAGE

French

CONTACT

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AIMS

This course is delivered in the form of computational and experimental Workshops. 12 sessions of practical works are distributed on 3 themes tackled in specialization of 5th year [dynamics of structures, fluids and conversion of energy, tribology and mechanical transmission]. The objectives here are to deal with scientific problems from the point of view of numerical or analytical modeling and from an experimental point of view. Thus, the complementarity and interactions between the two approaches will be at the heart of this work. The assumptions and choices of the models will be at the center of the reflections. Basic phenomenological notions will be illustrated and advanced numerical and experimental tools will be used.

CONTENT

Measurements of physical phenomena / Analyzes and understanding of observed phenomena / Definitions of hypotheses and choice of numerical and / or analytical models / comparison of results of numerical modeling with experimental measurements