

Metrology

Course code: AME2

ECTS Credits: 1

Department	: ET	Lectures	: 8h45
Lecturers	: A. Claverie	Tutorials	:
Year of study	: 1 st year	Laboratory sessions	:
Semester	: 2 nd semester	Project	:
Assessment method(s)	: 1 written test	Home works	:
Language of instruction	: English	Total hours	: 8h45
Type of courses	: Compulsory		

Objective: This course main goal is to describe several measurement methods which are commonly used in fluid mechanics.

Prerequisites: Basic knowledge in fluid mechanics, heat transfer and combustion

Content:

Several methods for the visualization and measurement of fluid velocity, of pressure and of concentration. These methods are more precisely described below, divided into several parts:

- **Vizualisation:** chemiluminescence, schlieren, shadowgraphy, interferometry, laser tomography
- **Pressure and Flow rate measurement**
- **Concentration measurement:** chromatography, Planar Laser Induced Fluorescence, spectroscopy
- **Velocity measurement:** Laser Doppler Velocimetry (LDV) and Particle image velocimetry (PIV)

Recommended reading: None

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