

## **Advanced experimental methods in fluid mechanics MEC664**

This course aims to provide an overview of state of the art experimental methods in fluid mechanics as well as the basics of signal processing to analyse experimental or numerical data.

The course is divided into two parts:

- 4 lectures in classroom will introduce the students to experimental methods (Hot-wire anemometry, Laser Doppler Anemometry, Particle Image Velocimetry, Particle Tracking) and signal processing methods (spectral and statistical analysis, various modal decompositions...)
- 3 practical sessions in the laboratory where the students, by group of two, will tackle a scientific problem using one of the experimental techniques introduced during the lecture

Evaluation is based on a oral defense and on the evaluation of the work provided during the lab sessions.

Prerequisite: Master 1 level in physics or mechanics is sufficient

**Timing:** The Course is offered in the first part (sept-nov) of the M2 year.

**Credits:** 3 ECTS

**Hours:** 30 hours.