

# UE Image and signal processing



Niveau d'étude  
Bac +4



ECTS  
3 crédits



Composante  
UFR PhITEM  
(physique,  
ingénierie, terre,  
environnement,  
mécanique)



Période de  
l'année  
Toute l'année

- > **Langue(s) d'enseignement:** Anglais
- > **Ouvert aux étudiants en échange:** Oui
- > **Code d'export Apogée:** PAX7MEAF

## Présentation

### Description

This course gives a general overview of some of the most common techniques used in image and signal processing, with a special focus in Fluid Mechanics. It starts with a review of the basic concepts of both signals and image processing (systems, block diagrams, Fourier series, 1 and 2D Fourier Transforms, basic image manipulation, filters...). In a second stage, the course focalises in more complex statistical techniques like, for the case of signals, spectral analysis, correlation and structure functions. For the case of images, it covers the reconstruction of particle trajectories and the basics of PIV (Particle Image Velocimetry) analysis.

### Heures d'enseignement

UE Image and signal processing - CMTD

Cours magistral - Travaux dirigés

24h

**Période :** Semestre 7

## Infos pratiques

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## Lieu(x) ville

› Grenoble

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## Campus

› Grenoble - Domaine universitaire