

UE Signals and systems



Niveau d'étude
Bac +4



ECTS
3 crédits



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



Période de
l'année
Automne (sept.
à dec./janv.)

- > **Langue(s) d'enseignement:** Anglais
- > **Ouvert aux étudiants en échange:** Oui
- > **Code d'export Apogée:** PAX7ECAA

Présentation

Description

The aim of the course is to provide the basic mathematical tools to study continuous and discrete signals and linear time-invariant systems using SciPy.

Objectifs

Outline

1. Introduction
2. Discrete mathematical tools
3. Discrete Linear time-invariant systems
4. Discrete filters design
5. Continuous mathematical tools
6. Continuous Linear time-invariant systems
7. Analog filter design
8. Sampling theory

Heures d'enseignement

UE Signals and systems- CM	CM	7,5h
UE Signals and systems - TD	TD	7,5h
UE Signals and systems - TP	TP	12h

Pré-requis recommandés

Basic mathematical knowledge (integral, differentiation, complex numbers, . . .)

Syllabus

- Oppenheim, A. V., Willsky, A. S., & Young, I. T. (1983). Signals and systems. Englewood Cliffs, N.J Prentice-Hall.
- Najarian, K., & Splinter, R. (2012). Biomedical signal and image processing. Taylor & Francis.

Période : Semestre 7

Infos pratiques

Campus

› Grenoble - Polygone scientifique