


UE Advanced Machine Learning in Earth Sciences

 ECTS
3 credits

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

 Semester
Automne

- > **Teaching language(s):** English
- > **Open to exchange students:** Yes
- > **Code d'export Apogée:** PAX9GEAD

Presentation

Description

A new course that will follow the one in the 2nd semester of the first year, but that can also be chosen by students with previous experience in the field. A detailed description will be posted later, in the meantime look at the corresponding UE of the first year.

This course introduces the main deep learning methods relevant for Earth Science applications, where the processing of time series and images (sometimes noisy, incomplete) and forecasting are routine problems. This includes for example Convolutional Neural Networks, Recurrent Neural Networks, and Generative Networks.

Pre-requisites: Ideally: Introduction to Machine Learning in Earth Sciences, course from the first year of STPE Master. If not: good knowledge in Python, basic notions in differential calculation and linear algebra.

Languages: English, French

Course parts

UE Advanced Machine Learning in Earth Sciences - CM/TD	Lectures (CM) & Teaching Unit (UE)	12h
UE Advanced Machine Learning in Earth Sciences - TP	Practical work (TP)	15h

Useful info

Campus

› [Grenoble - University campus](#)