

## Máster Universitario en Aprendizaje Profundo para el Tratamiento de Señales de Audio y Video / Deep Learning for Audio and Video Signal Processing

### Program Academic Structure::

Subject type	ECTS
Mandatory	48
Final dissertation (TFM)	12
Total	60

CÓDIGO	ASIGNATURA	SEMESTRE	CARÁCTER	ECTS	MÓDULO
33412	Deep Learning fundamentals and basic tools	1	Mandatory	8	-
33413	Review of Established Signal Processing Techniques	1	Mandatory	4	-
33414	Deep Learning for audio signal processing	1	Mandatory	6	-
33415	Deep Learning for image signal processing	1	Mandatory	6	-
33416	Deep Learning for video signal processing	1	Mandatory	6	-
33417	Biometrics & Applied Intelligence	2	Mandatory	6	-
33418	High Performance Computing for Deep learning	2	Mandatory	6	-
33419	Research methodologies and seminars	2	Mandatory	6	-
33420	Master thesis	2	Mandatory	12	-

### [Programs and Academic structure of the subjects](#)

#### Information

[\(Plan de estudios publicado en BOE\)](#) ↗

Given the international orientation of the proposed master, the admission profile has been defined in terms of the required knowledge, rather than specifying the degree titles that allow access to the master. Thus, the admission profile to the Master's Degree in Deep Learning for Audio and Video Signal Processing will correspond to the following candidates:

1. Engineers or candidates who hold a bachelor's degree in Engineering Areas related to ICT (Information and Communication Technologies), provided their degree contains at least the following contents:
  - a. 24 ECTS of mathematical fundamentals in calculus (12 ECTS), linear algebra (6 ECTS), probability and statistics (6 ECTS).
  - b. 12 ECTS of programming in some high-level language.

- c. 6 ECTS in signalprocessing.
  - d. 6 ECTS in machinelearning.
2. Graduates who hold an official degree equivalent to any of the above, either issued by a Spanish university or belonging to another member state of the European Higher Education Area, or so declared in accordance with the previous regulations of university studies in Spain. These graduates are required to demonstrate a level of training equivalent to the requirements defined in the first case.
  3. Applicants who hold degrees obtained in educational systems outside the European Education Area. These applicants are required to demonstrate a level of training equivalent to the requirements defined in the first case.

According to the academic profile of students being accepted to the Master, it will be considered whether they should complete an intensive leveling program scheduled at the beginning of the academic year in September. The program includes a leveling module in Fundamentals of Signal Processing of 1 ECTS, aimed at students whose previous training in the area is less than 12 ECTS. This module will be offered as a training supplement because it is not expressly a subject of the academic programme.

Since the official language for all courses is English, knowledge of the English language at the minimum level of the B2 certificate will be required for acceptance into the Master's programme. In case of not being English native speakers, this level of language must be accredited by a certificate or by an interview with the Master's Academic Committee.