

Academic Year: (2024 / 2025)

Review date: 01-02-2024

Department assigned to the subject: null

Coordinating teacher:

Type: Compulsory ECTS Credits : 6.0

Year : 3 Semester : 2

DESCRIPTION OF CONTENTS: PROGRAMME

1. Neural activity and perception.
2. Mechanisms of electrical stimulation and their applications.
3. Methods for the design of neural interfaces.
4. Intracortical prostheses for communication.
5. Neurostimulation by ultrasound.
6. Cochlear implants.
7. Retinal implants and V1 implants.
8. Electrophysiological measures of connectivity.
9. fMRI for the measurement of connectivity.
10. Optogenetics for the measurement of brain activity.

LEARNING ACTIVITIES AND METHODOLOGY

Classroom lectures.
Face-to-face classes: reduced (workshops, seminars, case studies).
Student individual work.
Laboratory session.
Final exam.

Seminars and lectures supported by computer and audiovisual aids.
Practical learning based on cases and problems, and exercise resolution.
Individual and group or cooperative work with the option of oral or written presentation.
Individual and group tutorials to resolve doubts and queries about the subject.
Internships and directed laboratory activities.

ASSESSMENT SYSTEM

% end-of-term-examination:	60
% of continuous assessment (assignments, laboratory, practicals...):	40
Final exam.	
Continuous evaluation.	