

<b>Responsable</b>	M. ANGELO ARLEO ET M. THOMAS BESSAIH					
<b>Descriptif</b>	<b>Parcours type</b>	<b>Option</b>	<b>Niveau</b>	<b>Semestre d'enseignement</b>	<b>ECTS</b>	<b>Effectif maximal</b>
	Neurosciences	Neurosciences Cellulaires et Intégrées - NCI	M2	S3	6	50
<b>Modalités pédagogiques</b>	<b>Volume horaire Cours</b>	<b>Volume horaire TD</b>	<b>Volume horaire TP</b>	<b>Présentiel/Distanciel</b>		
	54		6	Présentiel : 100%		
<b>Objectifs</b>	This module is about information processing mediated by neural networks. It focuses on the mechanisms underlying multisensory integration, neural coding, and memory formation/retrieval. It presents the multidisciplinary approaches set forth to investigate those topics, by illustrating the most recent developments in both experimental and theoretical research.					
<b>Thèmes abordés</b>	The module is organized around a series of lectures and workshops, dealing with the neuronal mechanisms involved in the representation and storage of information. The emphasis is on the mechanisms mediating multi-scale adaptation of neuronal representations of the external world and the encoding of short- and long-term memories. Another key aspect concerns the general nature of the solutions implemented by the brain to optimize the action-perception loop.					
<b>Compétences acquises à l'issue de l'UE (concepts, méthodologie et outils)</b>	The conceptual and methodological knowledge provided by courses is centred on integrative neurobiology. This module aims at showing the importance of combining experimental approaches (e.g., electrophysiology, behaviour, neuroimaging) and computational approaches (e.g., mathematical neuroscience, numerical simulations) for the study of neural network dynamics and their roles in the coding of information.					
<b>Prérequis</b>	Basic knowledge about neuronal excitability					
<b>Modalités d'évaluation/100</b>	<b>Ecrit</b>	<b>Oral</b>	<b>CC</b>	<b>Autre</b>		
	100/100					
<b>Langues utilisées</b>	<b>Dans les cours, TD, TP</b>			<b>Dans les documents, supports</b>		
	Anglais			Anglais		
<b>Localisation</b>	Sorbonne Université, Faculté des sciences (site Jussieu)					