



## Calendário Provisório 23/24

Mestrado / Doutoramento em Neurociências

Horário: As aulas decorrem maioritariamente às 3ª e 5ª feiras das 17:00 às 19:00 horas e às 4ª feiras entre as 09:00 e as 18:00 horas.

Nome do Módulo/Nome da UC (PT/Eng)	Carga Horária	Horas de contacto	ECTS	Coordenador(es) do Módulo	Resumo dos Conteúdos Programáticos	Metodologias de Avaliação	Calendário de Aulas	Dias	Horários	Sala	Calendário das Avaliações		
Opening Invited Lecture													
Get Together Session													
Neuranatomia e Neuroimagiologia / Neuronatomy and Neuroimaging UC: Neuroanatomia e Neuropatologia / Neuronatomy and Neuropathology	112	28TP	4	Lia Lucas Neto	Introduction to Neuroanatomy. Brain: Cerebral Cortex, White Matter, Basal Ganglia, thalamus and hypothalamus, limbic system, emotions and memory, ventricles, meninges and CSF. Cerebellum. Midbrain, pons and medulla oblongata, Cranial Nerves, ascending, descending and association tracts. Spinal cord. Spinal nerves and plexus. Brain arterial and venous vascularization. Autonomous Nervous System. Practical class: human brain dissection and visit to the Anatomy Institute. Human sense organs - Visual, Olfactory, Gustatory, Auditory and Vestibular Systems. Neurological Imaging.	Teste com questões de escolha múltipla	ter, 19/set/23  a  qui, 28/set/23	qui, 14/set/23	09:00 - 10:00	Auditório Almeida Lima (Sala de Aulas da Neurologia, Serviço de Neurologia, Piso 7, H5M)	NA		
									10:15 - 12:45				
									ter, 19/set/23	17:00 - 19:00	a definir	1ª Época: 09 de outubro (17h00 às 19h00)	
									qua, 20/set/23	17:00 - 19:00	a definir		
									qui, 21/set/23	17:00 - 19:00	a definir		
									ter, 26/set/23	17:00 - 19:00	a definir		
	qui, 28/set/23	16:00 - 19:00	a definir	2ª Época/Melhoria: a definir									
	qui, 28/set/23	17:00 - 19:00	a definir										
Cellular and Molecular Neurobiology / Neurobiologia Celular e Molecular UC: Neurobiologia Celular e Molecular	112	22T; 24TP; 10S	4	Ana M. Sebastião	Basics of neuronal excitability: electrochemical gradients and equilibrium potential, membrane potential, synaptic potential and action potential. Basics of neuronal communication: inhibitory vs excitatory transmission. Ion channels, ionotropic receptors vs metabotropic receptors. Transducing pathways operated by metabotropic receptors. Glutamatergic and GABAergic transmission – receptors and inactivation mechanisms. Plasticity of glutamatergic and GABAergic synaptic transmission. Cholinergic, noradrenergic and dopaminergic transmission; receptors and inactivation mechanisms; main circuits operated by them. Glial Cells and their ability to control synaptic activity. Concept of neuromodulation and main neuromodulators; concept of co-transmission. Blood-brain barrier: molecular anatomy and interplay within the neurovascular unit. Blood Brain barrier: Models and challenges to develop new therapeutic tools to act in the brain. Imaging and quantifying molecules by immunofluorescence and Western. Blot – Applications to neuroscience. Drug-receptor interactions and its relevance for neuroscience research. Evaluation of synaptic activity through electrophysiological recording Techniques. Glutamate receptor traffic, synaptic plasticity and cognitive disorders. New approaches to study the aged synapses.	Journal Club or Lab Visit Report or Extra-Curricular Seminar Report + Avaliação escrita	ter, 03/out/23  a  qui, 26/out/23	ter, 03/out/23	17:15 - 19:15	a definir	1ª Época: 06 Novembro (14h30 às 16h30)		
									qua, 04/out/23	09:15 - 18:30		a definir	
									ter, 10/out/23	17:15 - 19:15		a definir	
									qua, 11/out/23	17:00 - 18:30		a definir	
									qui, 12/out/23	17:15 - 19:15		a definir	
									ter, 17/out/23	17:15 - 19:15		a definir	
									qua, 18/out/23	09:15 - 16:45		a definir	2ª Época/Melhoria: a definir
									qui, 19/out/23	17:15 - 19:15		a definir	
									ter, 24/out/23	17:15 - 19:15		a definir	
									qua, 25/out/23	17:00 - 18:30		a definir	
	qui, 26/out/23	17:15 - 19:15	a definir										
Master and PhD of Neurosciences ----- Neuronal Degeneration and Regeneration / Degeneração e Regeneração Neuronal UC: Degeneração e Regeneração Neuronal	224	22T; 24TP; 10S	4	Ana M. Sebastião	Neurotrophic factors: key molecules for neuronal survival and plasticity. Cell death in healthy and diseased brain. The role of glial cells in neuroinflammation. Neuronal regeneration. Neural Stem cells and its neuroregenerative potential. Neuroinflammation and microglia: From neuropathological changes to therapeutic implications. Synaptic dysfunction in Rett Syndrome. Infection and transfection approaches at the service of neurosciences. Genetic approaches to fight neurodegenerative diseases. Protein aggregation in Alzheimer's disease. Multiple Sclerosis: new targets for therapeutic intervention. Mitochondrial dysfunction in neurodegenerative diseases. Modulation of neuronal maturation and differentiation by adenosine. Cannabinoid actions upon postnatal and adult neurogenesis. Driving Cell Death Machinery towards Neural Differentiation. Microtubule nucleation during brain development: from mitosis to neuronal morphology augmin takes the lead. Purinergic signaling and brain development. The ubiquitin/proteasome system and control of neuronal death.	Journal Club or Lab Visit Report or Extra-Curricular Seminar Report + Avaliação escrita	ter, 31/out/23  a  qui, 23/nov/23	ter, 31/out/23	17:15 - 19:15	a definir	1ª Época: 04 Dezembro (14h30 às 16h30)		
									qui, 02/nov/23	17:15 - 19:15		a definir	
									ter, 07/nov/23	17:15 - 19:15		a definir	
									qua, 08/nov/23	17:00 - 18:30		a definir	
									qui, 09/nov/23	17:15 - 19:15		a definir	
									ter, 14/nov/23	17:15 - 19:15		Aula Online	
									qua, 15/nov/23	09:15 - 18:30		a definir	2ª Época/Melhoria: a definir
									qui, 16/nov/23	17:15 - 19:15		a definir	
									ter, 21/nov/23	17:15 - 19:15		a definir	
									qua, 22/nov/23	17:00 - 18:30		a definir	
	qui, 23/nov/23	17:15 - 19:15	a definir										



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Mestrado / Doutoramento em Neurociências					Horário: As aulas decorrem maioritariamente às 3ª e 5ª feiras das 17:00 às 19:00 horas e às 4ª feiras entre as 09:00 e as 18:00 horas.						
Nome do Módulo/Nome da UC (PT/Eng)	Carga Horária	Horas de contacto	ECTS	Coordenador(es) do Módulo	Resumo dos Conteúdos Programáticos	Metodologias de Avaliação	Calendário de Aulas	Dias	Horários	Sala	Calendário das Avaliações
Master and PhD in Cognitive Science ----- Technologies for Integrative Analysis of the Nervous System	224	22T; 24TP; 10S	4	Ana M. Sebastião	Nuclear Medicine. Magnetic Resonance. Role of imaging in neurologic diagnosis. Brain Connectivity. Non-invasive magnetic stimulation. BCIs and physiologic computation.	Avaliação escrita	ter, 31/out/23  a  qui, 23/nov/23	ter, 31/out/23	17:15 - 19:15	a definir	1ª Época: 04 Dezembro (14h30 às 16h30)  2ª Época/Melhoria: a definir
								qui, 02/nov/23	17:15 - 19:15	a definir	
								ter, 07/nov/23	17:15 - 19:15	a definir	
								qui, 09/nov/23	17:15 - 19:15	a definir	
								ter, 14/nov/23	17:15 - 19:15	<b>Aula Online</b>	
								qui, 16/nov/23	17:15 - 19:15	a definir	
								ter, 21/nov/23	17:15 - 19:15	a definir	
qui, 23/nov/23	14:30 - 16:30	a definir									
Neuronal Circuits / Circuitos Neurais UC: Neurofisiologia de Sistema	336	34T; 34TP; 16S	4	Ana M. Sebastião	Mechanisms of drug dependence. Reward and Aversion in the brain: from cells to circuits to behaviour. Neuronal correlates of psychiatric diseases. Brain Maps for Decision-making. Neuroimaging: an overview. Optogenetic manipulation of neuronal circuits. The involvement of astrocytes in cortico-limbic function and behavior. Circuitry dysfunction in absence epilepsy. Animal Behavioral Testing in Theory and Practice: How to Assess Memory, Anxiety and Depression. Animal models of epilepsy. Nociceptive pathways and Mechanisms involved in the genesis of pain.	Journal Club or Lab Visit Report or Extra-Curricular Seminar Report + Avaliação escrita	ter, 28/nov/23  a  qui, 07/dez/23	ter, 28/nov/23	17:15 - 19:15	a definir	1ª Época: 18 Dezembro (14h30 às 16h30)  2ª Época/Melhoria: a definir
								qua, 29/nov/23	09:15 - 18:30	a definir	
								qui, 30/nov/23	17:15 - 19:15	a definir	
								ter, 05/dez/23	17:15 - 19:15	a definir	
								qua, 06/dez/23	17:00 - 18:30	a definir	
qui, 07/dez/23	17:15 - 19:15	a definir									
Neuroethics / Neuroética UC: Neuroética	14	4T	0,5	Diogo Teles	Ethics of Neurosciences and Neurosciences of Ethics. Conscious States. Advanced Directives. Chronic disorders of consciousness (doenças crónicas da consciência). The ethics in neurological research. Ethics and legislation in animal research. Role of an Ethics Committee in a University Hospital. Artificial Intelligence: a view on Morality, or artificial agents with qualities. Reciprocal inputs between Neuroscience and Robotics. Neurosciences at CAML.	Trabalho individual escrito	ter, 12/dez/23  a  ter, 19/dez/23	ter, 12/dez/23	17:15 - 19:15	a definir	1ª Época: a definir  2ª Época/Melhoria: a definir
								qua, 13/dez/23	09:30 - 17:10	a definir	
								qui, 14/dez/23	17:15 - 19:15	a definir	
								ter, 19/dez/23	17:15 - 19:15	a definir	
Autonomic Function / Função Autonómica UC: Neurofisiologia de Sistema	336	34T; 34TP; 16S	2	Vera Geraldes	Functional organization of the autonomic nervous system: Receptors and autonomic neurotransmission. Sympathetic preganglionic neurons and determinants of sympathetic nerve discharge. Vagal preganglionic neurons. Central autonomic pathways. Sensory innervation of the viscera. Regulation of body homeostasis: Cardiorespiratory control. Autonomic regulation of urinary bladder. Studying the autonomic nervous system: Animal studies and human evaluation: Invasive vs non invasive methodologies. Biological signal processing and the search for an autonomic signature. Maintenance of a steady-state: ANS and hypertension. Sleep and autonomic function. Alterations in autonomic function in spinal cord injury. Autonomic influence on paroxysmal atrial fibrillation. Reflex syncope and autonomic function.	Trabalho individual escrito	ter, 02/jan/24  a  qui, 11/jan/24	ter, 02/jan/24	17:15 - 19:15	Auditório 58 (Piso -1, EEM)	1ª Época: até 30 Abril  2ª Época/Melhoria: a definir
								qua, 03/jan/24	17:15 - 19:15		
								qui, 04/jan/24	17:15 - 19:15		
								ter, 09/jan/24	17:15 - 19:15		
								qua, 10/jan/24	17:15 - 19:15		
								qui, 11/jan/24	17:15 - 19:15		
Neuropatologia/ Neuropathology UC: Neuroanatomia e Neuropatologia/ Neuroanatomy and Neuropathology	112	28TP	4	José Pimentel	Normal CNS I and PNS histopathology. Basic knowledge of the histological techniques. Brain tumors pathology and epileptogenic tumors. Molecular biology of the gliomas. Temporal lobe epilepsies: epileptogenesis and pathology. Pathology of dementias. Familial amyloidosis polyneuropathy. Elemental lesions of CNS and PNS. Pathological aspects of myopathies. Neurocutaneous biopsies.	Trabalho individual escrito	ter, 16/jan/24  a  qui, 25/jan/24	ter, 16/jan/24	17:00 - 19:00	Auditório 58 (Piso -1, EEM)	1ª Época: a definir  2ª Época/Melhoria: a definir
								qua, 17/jan/24	09:00 - 12:00	Laboratório Neuropatologia (Piso 8, HSM)	
									14:00 - 17:00		
								qui, 18/jan/24	17:00 - 19:00	Auditório 58 (Piso -1, EEM)	
								ter, 23/jan/24	17:00 - 19:00	Auditório 58 (Piso -1, EEM)	
								qua, 24/jan/24	09:00 - 12:00	Laboratório Neuropatologia (Piso 8, HSM)	
									14:00 - 17:00		
qui, 25/jan/24	17:00 - 19:00	Auditório 58 (Piso -1, EEM)									



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Nome do Módulo/Nome da UC (PT/Eng)	Carga Horária	Horas de contacto	ECTS	Coordenador(es) do Módulo	Resumo dos Conteúdos Programáticos	Metodologias de Avaliação	Calendário de Aulas	Dias	Horários	Sala	Calendário das Avaliações
Clinical Neurophysiology / Neurofisiologia Clínica UC: Neurofisiologia de Sistema	336	34T; 34TP; 16S	4,5	Mamede de Carvalho	Instrumentation and Technical Notes on Clinical Neurophysiology; Axonal Excitability; Cortical Stimulation and Deep Brain Stimulation; Electroencephalography and Video-EEG Monitoring; Electrocardiography; Electromyography; Evoked Potentials; Magnetic Stimulation; Transcranial and Trans-spinal direct-current stimulation; Sleep Study; Small-Fiber Neuropathy; Spinal cord Physiology; Vestibular Function.	Teste de escolha múltipla	ter, 30/jan/24  a  qui, 15/fev/24	ter, 30/jan/24	17:15 - 19:15	a definir	1ª Época: a definir  2ª Época/Melhoria: a definir
								qua, 31/jan/24	11:30 - 13:00	a definir	
								qua, 31/jan/24	14:00 - 17:00	Visita a Laboratório (IMM, EEM)	
								qui, 01/fev/24	17:15 - 19:15	a definir	
								ter, 07/fev/23	11:15 - 12:30	a definir	
								ter, 07/fev/23	14:00 - 17:00	Visita a Laboratório (IMM, EEM)	
								qui, 08/fev/24	17:15 - 19:15	a definir	
								ter, 13/fev/24	17:15 - 19:15	a definir	
								qua, 14/fev/24	10:30 - 12:30	a definir	
qua, 14/fev/24	14:00 - 15:30	a definir									
qua, 14/fev/24	14:00 - 17:00	Visita a Laboratório (IMM, EEM)									
qui, 15/fev/24	17:15 - 19:15	a definir									
Biostatistics / Bioestatística UC: Bioestatística	98	10T; 10TP; 5S	3,5	Paulo Nogueira	Planning a study and Exploratory Data Analysis; Concept of a Statistical Test; Tests to compare independent samples; Confidence intervals; Survival analysis: Kaplan-Meier, log-rank test.	Teste de escolha múltipla	ter, 20/fev/24  a  qui, 07/mar/24	ter, 20/fev/24	17:00 - 19:00	a definir	1ª Época: 08 Março (17h00 às 18h30)  2ª Época/Melhoria: a definir
								ter, 21/fev/23	17:00 - 19:00	a definir	
								qua, 22/fev/23	17:00 - 19:00	a definir	
								ter, 27/fev/24	17:00 - 19:00	a definir	
								qua, 28/fev/24	17:00 - 19:00	a definir	
								qui, 29/fev/24	17:00 - 19:00	a definir	
								ter, 05/mar/24	17:00 - 19:00	a definir	
								qua, 06/mar/24	17:00 - 19:00	a definir	
qui, 07/mar/24	17:00 - 19:00	a definir									
Research in Clinical Neurosciences / Investigação Clínica em Neurociências UC: Investigação Clínica em Neurociências	168	17T; 17TP; 8S	6	Patrícia Canhão	Basic tools of clinical research in neurosciences; Type of studies: case reports and case-series, case-control studies, cohort studies, systematic reviews of observational studies; Random and systematic errors; Risk factors and causal association; Prognostic research; Diagnostic Tests; Translational research in neurosciences; Clinical research in neurophysiology; Research in genetic neurological disorders; Critical appraisal of literature.	Trabalho individual escrito + Journal Club	ter, 12/mar/24  a  qui, 21/mar/24	ter, 12/mar/24	17:00 - 19:00	a definir	1ª Época: a definir  2ª Época/Melhoria: a definir
								qua, 13/mar/24	09:00 - 17:00	a definir	
								qui, 14/mar/24	17:00 - 19:00	a definir	
								ter, 19/mar/24	17:00 - 19:00	a definir	
								qua, 20/mar/24	09:00 - 17:00	a definir	
								qui, 21/mar/24	17:00 - 19:00	a definir	



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Nome do Módulo/Nome da UC (PT/Eng)	Carga Horária	Horas de contacto	ECTS	Coordenador(es) do Módulo	Resumo dos Conteúdos Programáticos	Metodologias de Avaliação	Calendário de Aulas	Dias	Horários	Sala	Calendário das Avaliações
Therapeutic Research in Neurosciences / Investigação Terapêutica em Neurociências UC: Investigação Clínica em Neurociências	168	17T; 17TP; 8S	3	Joaquim Ferreira	Drug discovery and preclinical development; Clinical development of medicinal products; How to design a clinical trial; Clinical outcomes and biomarkers; Safety of medicinal products and medical devices; Research with non-pharmacologic therapeutic interventions; Systematic reviews, meta-analysis and critical appraisal of data; Introduction to pharmacoconomics.	Trabalho individual escrito	ter, 02/abr/24	ter, 02/abr/24	17:15 - 19:15	a definir	1ª Época: a definir 2ª Época/Melhoria: a definir
							qua, 03/abr/24	qua, 03/abr/24	14:00 - 18:00	a definir	
							qui, 04/abr/24	qui, 04/abr/24	17:15 - 19:15	a definir	
							ter, 09/abr/24	ter, 09/abr/24	17:15 - 19:15	a definir	
							qua, 10/abr/24	qua, 10/abr/24	14:00 - 18:00	a definir	
							qui, 11/abr/24	qui, 11/abr/24	17:15 - 19:15	a definir	
Cognitive Functions / Funções Cognitivas UC: Neuropsicologia	140	14T; 14P; 7S	4,5	Isabel Pavão Martins	Functional organization of language: The study of focal lesions; Models of learning and decision making; Assessment of memory systems. Right hemisphere syndromes and space delusions: Executive functions and the frontal lobes; Cognitive rehabilitation.	Journal Club + Teste escolha múltipla	ter, 16/abr/24	ter, 16/abr/24	17:15 - 19:15	a definir	1ª Época: a definir 2ª Época/Melhoria: a definir
							qua, 17/abr/24	qua, 17/abr/24	09:00 - 10:30	Laboratório Investigação Linguagem, Piso 8 (HSM)	
							qui, 18/abr/24	qui, 18/abr/24	17:15 - 19:15	a definir	
							ter, 23/abr/24	ter, 23/abr/24	17:15 - 19:15	a definir	
							qua, 24/abr/24	qua, 24/abr/24	09:00 - 10:30	Laboratório Investigação Linguagem, Piso 8 (HSM)	
							qui, 02/mai/24	qui, 02/mai/24	17:15 - 19:15	a definir	
Cognitive Deterioration in Ageing and Dementia / Deterioração Cognitiva no Idoso e Demência UC: Neuropsicologia	140	14T; 14P; 7S	0,5	Alexandre de Mendonça	Historical notes about cognition and ageing. General theories of ageing of the brain and of the organism. Markers of brain ageing. Brain ageing in different species. Neuronal and synaptic morphologic changes. Electrophysiological changes of ageing, including Long Term Potentiation. Neurochemical changes of cholinergic, dopaminergic, adenosinergic systems. The biological significance of brain ageing. Subjective Memory Complaints. Neuropsychological tests. Genetic factors. Cerebrospinal fluid biomarkers. Magnetic resonance imaging. PETscan biomarkers. Historical perspective, are age related white matter changes relevant or not. Prevalence and risk factors. Cognitive changes associated with age related white matter changes (ARWMC). Behavioral symptoms due to ARWMC. Physical and neurological changes other than cognition due to ARWMC. How to implement a longitudinal study across borders. The "longitudinal design": advantages and limitations.	Trabalho individual escrito	ter, 07/mai/24	ter, 07/mai/24	17:15 - 19:15	a definir	1ª Época: a definir 2ª Época/Melhoria: a definir
							qua, 08/mai/24	qua, 08/mai/24	16:00 - 19:00	a definir	
							qui, 09/mai/24	qui, 09/mai/24	17:15 - 19:15	a definir	
Computational Neuroscience / Neurociência Computacional UC: Neurofisiologia de Sistema	336	34T; 34TP; 16S	1,5	Tiago Maia	Computational Cognitive Neuroscience; Computational Psychiatry; Computational Models of Single Neurons and Neuronal Networks; Fitting Computational Models to Behavioral.	Trabalho individual escrito	ter, 14/mai/24	ter, 14/mai/24	17:15 - 19:15	Sala 7 (Piso 1, EEM)	1ª Época: a definir 2ª Época/Melhoria: a definir
							qua, 15/mai/24	qua, 15/mai/24	10:30 - 12:30 13:30 - 15:30	Sala 49 (Piso -1, EEM)	
							qui, 16/mai/24	qui, 16/mai/24	16:30 - 18:30	Sala 49 (Piso -1, EEM)	
							qui, 16/mai/24	qui, 16/mai/24	17:15 - 19:15	Sala 7 - IFA (Piso 1, EEM)	

A Comissão Científica do Curso reserva-se o direito de poder alterar os horários agora indicados. Neste caso serão informados atempadamente pelos serviços do IFA.