

NAME	NEUROBIOLOGY OF COGNITION	COD:
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MASTER DEGREE	YEAR OF STUDY 2	SEMESTER 1	STATUS OF THE DISCIPLINE (F-fundamental / S-specialisation / C-complementary) S	TYPE OF THE DISCIPLINE (OB-obligatory / opt-optional / fac-facultative) OB
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TOTAL HOURS/ WEEK				TOTAL HOURS /SEMESTER	TOTAL HOUS INDIVIDUAL ACTIVITY*	NUMBER OF CREDITS	TYPE OF EVALUATION (P-on going, C-coloquy, E-exam, M-mixt)	LANGUAGE
C	S	L	Pr.					
2		1		42	28	6	M	Romanian

TEACHER	TEACHING AND SCIENTIFIC DEGREE, SURNAME, NAME	DEPARTMENT
	PROF. MARIA-LUISA FLONTA	DAFAB

BACKGROUND	Biology, PhD in Physiology, Biophysics, Electrophysiology,
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OBJECTIVES	<ol style="list-style-type: none"> 1. Understanding physiological processes which realise human and animal cognition. 2. Explanation and interpretation of experimental data and their inclusion in a theoretical framework. 3. Important concepts are introduced and explained via experiments that illustrate them, in order to critically evaluate the ever growing of findings that the field is generating. 4. Experimental work is part of the programme in order to aquire laboratory skills, to stimulate team formation, to encourage initiative.
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SUBJECTS	<ol style="list-style-type: none"> 1. Introduction 2. Visual perception. Auditive perception. 3. Attention 4. Learning and memory 5. Emotions and feelings 6. Consciousness 7. Goal fixation, planing, decision making, executive control and action. 8. Neurobiology of human vollition 9. Thinking and problem solving 10. Creativity 11. Theory of mind and social cognition 12. Psychotropic drug abuse and cerebral rewarding circuits. Mechanisms of drug dependence.
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PRACTICAL SESSIONS	<ol style="list-style-type: none"> 1. Parameters of visual experience, explanation of optical illusions perception. 2. Parameters of auditive experience, maping of sound direction processing. 3. Various utilizations of the Stroop test. 4. EEG recording and event related potentials generated with visual and auditive stimuli. 5. Tests for working memory and procedural memory. 6. Measuring mental flexibility in variable conditions by using the Wisconsin card sorting test . 7. Functional RMN method: its principles and results processing. 8. "Hanoi Tower" paradigm used for problem solving.
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TEACHING METHODS	<p>At the course: lecture, discussing problems, euristic conversation.</p> <p>Practical sessions: demonstrations of neurobiological processes, papers' presentations, free discussions to verify if students have understood the terms.</p>
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REFERENCES	<p>Baars B, Gage N, Cognition, Brain and Consciousness. Introduction to Cognitive Neuroscience, 2-nd edition, Academic Press, Elsevier Ltd, 2010</p> <p>Carlson NR, Foundations of Behavioural Neuroscience, 9-th edition, Pearson Education, 2013</p>
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	<p>Gazzaniga MS, Ivry RB, Cognitive Neuroscience: The Biology if the Mind, 4-th edition, WW Norton & Co, 2014</p> <p>Glimcher PW, Fehr E, Neuroeconomics. Decision making and the brain, 2-nd edition, Academic Press, Elsevier, 2014</p> <p>Kalat JW, Biological Psychology, 12-th edition, Cengage Learning, USA, 2016</p> <p>Kandel E, Schwarz JH, Jessel TM, Principles of neural science, 4-th edition, Mc Graw Hill Co, 2000</p> <p>Kolb B, Whishaw IQ, Fundamentals of Human Neuropsychology, 7-th edition, Worth Publ, 2015</p> <p>Nicholls NG, Martin AR, Fuchs PA, Brown DA, Diamond ME, Weisblat D, From Neuron to Brain, 5th Edition, Sinauer Ass, NY, 2011</p> <p>Pinel JPJ, Biopsychology, 9-th edition, Allyn & Bacon, 2013</p> <p>Postle BR, Essentials of Cognitive Neuroscience, Willey-Blackwell, 2015</p>
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EVALUATION	conditions	The answers to the final evaluation (100%)
	criteria	<ol style="list-style-type: none"> 1. Precise knowledge on the principles and methods presented, including the use of international terminology. 2. Capacity to summarise the taught information and to elaborate concise answers 3. Presentation of a scientific paper or their own results.
	forms	Written evaluation – final exam
	formula of the final grade	Paper presentation and discussions - 20% Final essay : 20% Written exam: 60%.

Specific competences *	
1. Competences about learning and understanding	<ul style="list-style-type: none"> - knowing and correctly using specific terms of the field - understanding fundamental processes in physiology - identification of terms, relationships, processes based on the knowledge acquired - correct use of physiology terms - defining /naming physiology concepts - acquire basic and specific knowledge
2. Competences about explanation and interpretation	<ul style="list-style-type: none"> - explaining and interpreting processes and theoretical ideas specific to the subject - generalizing, particularization, integration of the information - making connections between results - ability to analyse and synthetise information
3. Instrumental competences	<ul style="list-style-type: none"> - utilization of methods, techniques and specific intrumenst of investigations - connections between different types of representations, between representations and object - describing states, systems, processes, phenomenons - ability to put into practice the theoretical knowledge - research abilities
4. Competences about attitude	<ul style="list-style-type: none"> - developing positive attitudes and responsibility towards science - getting involved in its own personal development - implication in scientific activities related to the subject - ability to collaborate with other specialists in the field

Professor Maria-Luisa Flonta

