Masters program in "COGNITIVE SCIENCE" Educational Offer a.y. 2022/2023

CURRICULUM COGNITIVE NEUROSCIENCE

MANDATORY COURSES

Year	Code	Course	Hours	Credits	SSD	TAF	Semester	Professor(s)	Info
1	154103	Foundations of Cognitive Psychology and Neuroscience I	42	6	M-PSI/01	Caratteriz.	1	**Luca Turella (21 hours)** Scott Fairhall (21 hours)	in common with FBN track
1	154104	Foundations of Cognitive Psychology and Neuroscience II	42	6	M-PSI/02	Caratteriz.	1	**Manuela Piazza (21 hours) DOC RIF** Roberto Bottini (21 hours)	
1	154127	Advanced Cognitive Psychology and Neuroscience	42	6	M-PSI/02	Caratteriz.	2	**Scott Fairhall (21)/**Luca Turella (21) /Scott Fairhall (21 hours)	
1	154148	Research Design	63	9 (6+3)	6 CFU M-PSI/02 3 CFU ING INF/05	Caratteriz.	2	**Uri Hasson (42 ore) DOC RIF** PHD To be defined (21 hours)	in common with CLC and FBN tracks
1	154135	Neurolinguistics	42	6	L-LIN/01	Caratteriz.	2	Costanza Papagno	in common with FBN track
1	154136	Introduction to Computer Programming (Matlab)	42	6	ING-INF/05	Caratteriz.	1	**Scott Fairhall (42 hours)** To be defined (42 hours)	in common with FBN track
1	154080	Neural Foundations of Human Behaviour	42	6	BIO/09	Caratteriz.	1	Luigi Cattaneo	in common with FBN track
1	154134	Foundations of Brain Imaging	42	6	M-PSI/02	Caratteriz.	1	**Jorge Jovicich (22 hours) DOC.RIF.** Daniel Baldauf (20 hours)	CLC track students cannot attend this course as "free choice" course

ELECTIVE COURSES - choose two courses among:

Year	Code	Course	Hours	Credits	SSD	TAF	Semester	Professor(s)	Info
1	154120	Clinical Neurology and Neuropsychology	42	6	M-PSI/08	Affine	1	**Alessandra Dodich (38 hours)** Costanza Papagno (4 hours)	in common with FBN track
1	154119	Fundamental Hands on Functional Neuroimaging Analysis	42	6	M-PSI/02	Affine	1	**Jorge Jovicich** (28 hours**)** Daniel Baldauf (14 hours)	This course is defined as a 'Lab'.
1	154137	Cognitive neuroscience of infant development	42	6	M-PSI/02	Affine	2	Eugenio Parise	in common with FBN track
1	154094	Current Topics in Brain Connectivity	42	6	M-PSI/02	Affine	2	Daniel Baldauf	in common with FBN track
1	154138	Scientific Communication	42	6	M-PSI/02	Affine	1	**Uwe Mayer (26 hours),** Stefania Bracci (16 hours)	

MANDATORY ACTIVITIES 2nd year

2	154038	Internship	375	15	NN	F	annual		
2	154039	Master Thesis	750	30	PROFIN_S	E	annual		

Masters program in "COGNITIVE SCIENCE" Educational Offer a.y. 2022/2023

- ***CURRICULUM COMPUTATIONAL AND THEORETICAL MODELLING OF LANGUAGE AND COGNITION (CLC)***

MANDATORY COURSES

Year	Code	Course	Hours	Credits	SSD	TAF	Semester	Professor(s)	Info
1	154139	Foundations of Cognitive Psychology and Neuroscience	63	9	M-PSI/01	Caratteriz.	1	Roberto Bottini DOC.RIF.	
1	154140	Introduction to Computer Programming (Python)	42	6	INF/01	Caratteriz.	1	**Paolo Rota (22 hours**) Jakub Szymanik (20 hours)	
1	154101	Research Design	42	6	M-PSI/02	Caratteriz.	2	Uri Hasson (42 hours) DOC.RIF.	6 CFU in common with CN and FBN tracks
1	154130	Mathematical basics for Cognitive Science	42	6	M-PSI/02	Caratteriz.	1	Elisa Frasnelli	
1	154141	Machine Learning for NLP	42	6	ING-INF/05	Caratteriz.	2	**Stefano Teso (20 hours)** To be defined (22 hours)	
1	154152	Introduction to Human Language	42	6	L-LIN/01	Caratteriz.	1	Roberto Zamparelli DOC.RIF.	
1	154147	Computational linguistics	42	6	ING-INF/05	Caratteriz.	1	Raffaella Bernardi	
1	154142	Computational Modelling of Perception	42	6	M-PSI/02	Caratteriz.	2	**Stefania Bracci (24 hours),** Raffaella Bernardi (18 hours)	

ELECTIVE COURSES - choose two courses among:

Year	Code	Course name	Hours	Credits	SSD	TAF	Semester	Professor(s)	Info
1	154144	Machine Learning for NLP II	42	6	ING-INF/05	Affine	1	**Stefano Teso (22 hours)** Paolo Rota (20 hours)	This course is at an advanced level: therefore a good knowledge in Machine Learning for NLP is pre-requisit
1	154088	Human Language Technologies	42	6	ING-INF/05	Affine	2	Carlo Strapparava	
1	154061	Logical Structures in Natural Language	42	6	M-FIL/05	Affine	2	Roberto Zamparelli	
1	154145	Semantics and Cognition	42	6	M-FIL/05	Affine	1	Jakub Szymanik	

MANDATORY ACTIVITIES 2nd year

2	154038	Internship	375	15	NN	F	Annual		
2	154039	Master Thesis	750	30	PROFIN_S	E	Annual		

- ***CURRICULUM FUNDAMENTAL BEHAVIOURAL NEUROSCIENCE (FBN)***

MANDATORY COURSES

Year	Code	Course	Hours	Credits	SSD	TAF	Semester	Professor(s)	Info
1	154103	Foundations of Cognitive Psychology and Neuroscience I	42	6	M-PSI/01	Caratteriz.	1	**Luca Turella (21 hours)** Scott Fairhall (21 hours)	in common with CN track
1	154136	Introduction to Computer Programming (Matlab)	42	6	ING-INF/05	Caratteriz.	1	**Scott Fairhall (42 hours)** To be defined (42 hours)	in common with CN track
1	154148	Research Design	63	9 (6+3)	6 CFU M-PSI/02 3 CFU ING INF/05	Caratteriz.	2	**Uri Hasson (42 ore) DOC RIF** PHD To be defined (21 hours)	in common with CLC and CN tracks
1	154080	Neural Foundations of Human Behaviour	42	6	BIO/09	Caratteriz.	1	Luigi Cattaneo	in common with CN track
1	154146	Animal Cognition and Neuroscience	63	9	M-PSI/02	Caratteriz	2	**Giorgio Vallortigara (28 hours) DOC.RIF.** Paola Sgadò (21 hours) Uwe Mayer (14 hours)	
1	154149	Brain Development and Disease	63	9	BIO/09	Caratterizz	2	Yuri Bozzi	
1	154135	Neurolinguistics	42	6	L-LIN/01	Caratteriz.	2	Costanza Papagno	in common with CN track

ELECTIVE COURSES - choose two courses among:

Year	Code	Course	Hours	Credits	SSD	TAF	Semester	Professor(s)	Info
1	154118	Cellular and Molecular Neuroscience	63	9	M-PSI/02	6 cfu Affine 3 cfu a scelta libera	2	Paola Sgadò	The course includes 21 hours of laboratory exercises (at CIBIO).
1	154150	Comparative Neuroanatomy and Evolution	42	6	M-PSI/02	Affine	1	Uwe Mayer	
1	154151	Invertebrate Neuroscience	42	6	M-PSI/02	Affine	1	Elisa Frasnelli	

or two courses among these:

Year	Code	Course	Hours	Credits	SSD	TAF	Semester	Professor(s)	Info
1	154120	Clinical Neurology and Neuropsychology	42	6	M-PSI/08	Affine	1	**Alessandra Dodich (38 hours)** Costanza Papagno (4 hours)	in common with CN track
1	154137	Cognitive neuroscience of infant development	42	6	M-PSI/02	Affine	2	Eugenio Parise	in common with CN track
1	154094	Current Topics in Brain Connectivity	42	6	M-PSI/02	Affine	2	Daniel Baldauf	

MANDATORY ACTIVITIES 2nd year

2	154038	Internship	375	15	NN	F	annual		
2	154039	Master Thesis	750	30	PROFIN_S	E	annual		

FREE CHOICE COURSES FOR CN, CLC AND FBN.
Choose 12 credits (max.15)

FREE CHOICE COURSES OFFERED BY CIMeC:

Year	Code	Course	Hours	Credits	SSD	TAF	Semester	Professor(s)	Info
1,2	154122	Advanced Hands on fMRI Analysis	42	6	M-PSI/02	A scelta	2	**Stefania Bracci (18 hours)** To be defined (14 hours) Scott Fairhall (10 hours)	This course is defined as a 'Lab'.
1,2	154123	Advanced Hands on M/EEG Analysis	42	6	M-PSI/02	A scelta	2	Paolo Belardinelli	This course is defined as a 'Lab'.
1,2	154112	Advanced Topics in Reasoning and Decision Making	42	6	M-PSI/01	A scelta	1	Stefania Pighin	
1,2	154113	Advanced Topics in Motor Cognition	42	6	BIO/09	A scelta	2	Luca Turella	
1,2	154064	Advanced Topics in Perception and Attention	42	6	M-PSI/02	A scelta	1	**Veronica Mazza (36 hours)** Massimiliano Zampini (6 hours)	
1,2	154124	Multimodal Electrophysiological Recording and Stimulation	42	6	BIO/09	A scelta	1	Paolo Belardinelli	
1,2	154091	Advanced Topics in Language/Cognition	42	6	L-LIN/01	A scelta	2	Roberto Zamparelli	
1,2	154153	Language and Social Cognition	42	6	M-PSI/02	A scelta	1	Uri Hasson	
1,2	154154	Anatomy, physiopathology and immunology of the limbic system: an update of "Mechanism of emotion"	21	3	MED/26	A scelta	2	Bruno Giometto	

FREE CHOICE COURSES OFFERED BY OTHER DEPARTMENTS

Year	Code	Course	Hours	Credits	SSD	TAF	Semester	Professor(s)	Info
1,2	145801	Neuroimaging for data science	42	6	M-PSI/02	A scelta	1	Daniel Baldauf	Course offered by the Master's course in Data Science (Dep. of Sociology and Social Research)
1,2	146078	Grounded Language Processing	60	9	ING-INF/05	A scelta	1	Raffaella Bernardi	Course offered by the Master's course in Artificial Intelligence Systems (Dep. of Information Engineering and Computer Science)