



# UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Scienze Psicologiche, Pedagogiche, dell'Esercizio Fisico e della Formazione
ACADEMIC YEAR	2016/2017
MASTER'S DEGREE (MSC)	CLINICAL PSYCHOLOGY
SUBJECT	CEREBRAL VISUALISATION TECHNIQUES AND NEUROMODULATION
TYPE OF EDUCATIONAL ACTIVITY	C
AMBIT	20969-Attività formative affini o integrative
CODE	17951
SCIENTIFIC SECTOR(S)	M-PSI/02
HEAD PROFESSOR(S)	TURRIZIANI PATRIZIA      Professore Ordinario      Univ. di PALERMO
OTHER PROFESSOR(S)	
CREDITS	6
INDIVIDUAL STUDY (Hrs)	110
COURSE ACTIVITY (Hrs)	40
PROPAEDEUTICAL SUBJECTS	
MUTUALIZATION	
YEAR	2
TERM (SEMESTER)	1° semester
ATTENDANCE	Not mandatory
EVALUATION	Out of 30
TEACHER OFFICE HOURS	<b>TURRIZIANI PATRIZIA</b> Tuesday    9:30    11:30    Edificio 15, 5° piano, stanza 012

**DOCENTE:** Prof.ssa PATRIZIA TURRIZIANI

<b>PREREQUISITES</b>	Knowledge of physiological psychology and cognitive neuroscience. Basic knowledge of chemistry, physics, statistics.
<b>LEARNING OUTCOMES</b>	<p>Knowledge and understanding The course aims to provide students with theoretical and practical knowledge on main techniques neuroimaging and their use in the clinical setting. They will be deepened principles of operation of each method, experimental designs and data analysis procedures.</p> <p>Applying knowledge and understanding Student will acquire knowledge on the theoretical and methodological of the neuroimaging and brain stimulation fields of study, as well as in diagnosis of cognitive disorders.</p> <p>Making judgements In the light of the knowledge acquired, the student will be 'able to design and interpret experimental protocols in clinical research.</p> <p>Communication. The student will provide information, formulate hypotheses and interpret empirical data of experimental and clinical research.</p> <p>Lifelong learning skills Necessary skills to understand the normal and pathological functioning of cognitive functions and psychiatric disorders.</p>
<b>ASSESSMENT METHODS</b>	Preliminary written test (30 questions). Oral examination.
<b>EDUCATIONAL OBJECTIVES</b>	The course aims to provide students with theoretical and practical knowledge on main techniques neuroimaging and their use in the clinical setting. They will be deepened principles of operation of each method, experimental designs and data analysis procedures.
<b>TEACHING METHODS</b>	frontal lessons, experimental training in lab
<b>SUGGESTED BIBLIOGRAPHY</b>	<ul style="list-style-type: none"> <li>- Appunti di lezione</li> <li>- Neuroscienze cognitive di Purves - Brannon - Cabeza - Huettel - La Bar Platt Editore: Zanichelli</li> <li>- CJ Price, CJ Mummary, CJ Moore, RSJ Frackowiak, KJ Friston (1999). Delineating necessary and sufficient neural systems with functional imaging studies of neuropsychological patients. Journal of Cognitive Neuroscience, 11:4, pp. 371-382.</li> <li>- CJ Price, EA Warburton, CJ Moore, RSJ Frackowiak, KJ Friston (2001). Dynamic Diaschisis: anatomically remote and context-sensitive human brain lesions. Journal of Cognitive Neuroscience, 13:4, pp. 419-429.</li> <li>- CJ Price and KJ Friston Neurocase (2002) Functional imaging studies of Neuropsychological Patients: Applications and Limitations. Neurocase, 8, pp. 345-354</li> <li>- Ulteriori articoli per l'approfondimento di tematiche specifiche saranno consigliati durante il corso.</li> </ul>

## SYLLABUS

<b>Hrs</b>	<b>Frontal teaching</b>
3	Theoretical introduction to neuroimaging techniques (CT, MRI, SPECT, PET, fMRI, TMS)
2	The stereotaxic method
10	Functional neuroimaging: methodology, experimental paradigms and applications
18	Applications of functional neuroimaging methods to study of the main cognitive functions: spatial attention and neglect, memory, language.
5	Functional neuroimaging method application to study of psychiatric disorders
<b>Hrs</b>	<b>Practice</b>
2	Neuromodulation techniques