

BIOPSYCHOLOGY OF MENTAL DISORDERS

1. GENERAL

SCHOOL	SOCIAL SCIENCES		
DEPARTMENT	PSYCHOLOGY		
LEVEL	Undergraduate		
COURSE CODE	PSY-2403	SEMESTER	4 th
COURSE TITLE	BIOPSYCHOLOGY OF MENTAL DISORDERS		
COURSE INSTRUCTOR	George Panagis, Professor of Biopsychology		
TEACHING ACTIVITIES	WEEKLY HOURS	ECTS	
Lectures	3	4	
COURSE TYPE:	Specialized knowledge (Elective)		
PREREQUISITES COURSES:	NONE		
INSTRUCTION/EXAM LANGUAGE:	Greek		
OFFERED TO ERASMUS STUDENTS:	YES (independent study of English literature and exams in English)		
COURSE WEB PAGE (URL):	https://elearn.uoc.gr/course/view.php?id=142		

2. LEARNING OUTCOMES

Learning Outcomes
<p>This course focuses on an issue of great interest to psychologists: the neurobiological basis of severe psychological disorders. The course aims to present various approaches that are used in understanding the underlying causes, the pathophysiology and biological therapies of severe psychological disorders. Thus, the main objective of the course is to interpret these disorders based on brain function. The course will not cover the social underpinnings of mental disorders. A large number of lectures will be devoted to presenting the psychotropic drugs which are used in the treatment of these disorders.</p> <p>Upon completing the course, students will evaluate the biopsychological approaches and the neurobiological basis of severe mental disorders. In addition, students will comprehend the actions of the major psychotropic drugs which are used for the treatment of mental disorders at the neural and behavioral levels, as well as the specific characteristics of each.</p>
General Competencies
<ul style="list-style-type: none"> • Search for, analysis and synthesis of data and information, with the use of the necessary technology. • Working independently. • Working in an international environment. • Production of free, creative and inductive thinking. • Criticism and self-criticism

3. COURSE CONTENT

- Introduction: Historical overview in the study of brain and behavior. The origins of biological psychiatry. The development of psychopharmacology.
- Brain basics: Neurons, neural transmission and behavior.
- Biopsychology of schizophrenia (Introduction, Epidemiological data, Heritability-Vulnerability/Predisposition, Genetics and genes related to schizophrenia, Neuroanatomy of schizophrenia, Possible causes of brain abnormalities in schizophrenia, Schizophrenia as a neurodevelopmental disorder, Drug-induced psychosis, Pharmacology of schizophrenia-Neurochemistry of schizophrenia, Antipsychotic drugs).
- Biopsychology of affective disorders (Introduction, Epidemiological data, Heritability-Vulnerability/Predisposition, Genetics and genes related to affective disorders, Biological causes, Neuroanatomical abnormalities in affective disorders, Neurochemistry of affective disorders, The role of circadian rhythms in depression, Seasonal affective disorder, Biological therapies for affective disorders).
- Biopsychology of anxiety disorders (Introduction, Epidemiological data, Heritability-Vulnerability/Predisposition, Genetics and genes related to anxiety disorders, Biological causes of panic disorder, Neuroanatomical substrate of panic disorder, Biological causes of obsessive-compulsive disorder, Neuroanatomical substrate of obsessive-compulsive disorder, Biological therapies for obsessive-compulsive disorder, Anxiolytic drugs, Pharmaceutical plants with anxiolytic actions, Neurochemistry of anxiety).

4. INSTRUCTIONAL AND LEARNING METHODS - EVALUATION

INSTRUCTION METHOD	In class (face-to-face).		
INFORMATION AND COMMUNICATION TECHNOLOGIES USED	Use of ICT in teaching Support for learning (communication with students and delivery of all course material) via the UoC e-learn online platform.		
TEACHING ORGANIZATION	<i>Activity</i>	<i>Semester Workload</i>	<i>ECTS credits</i>
	Lectures	39	1,56
	Independent Study	60	2,4
	Final Exams	2	0,08
	Course Total	101	4,04
STUDENT EVALUATION	The evaluation (written exams) is in Greek for the students of UoC and in English for the Erasmus students. The evaluation criteria are presented during the 1 st lecture of the semester. Moreover, all criteria are available to the students via the website of course on UoC e-learn platform.		

5. BIBLIOGRAPHY

- Barondes, S. (1997). *Molecules and Mental Illness*. Athens: Ellin Publications. (Greek Edition).
- Breedlove, M., Rosenzweig, M. R., Watson, N. V. (2011). *Biological Psychology*. Athens: Parisianou Publications. (Greek Edition).
- Charney, D. S., & Nestler, E. J. (Eds.) (2004). *Neurobiology of Mental Illness* (2nd ed.).

Oxford: Oxford University Press.

- Julien, R. M. (2003). *Primer of drug action*. Nicosia: Broken Hill Publishers Ltd. (Greek Edition).
- Kandel, E. R., Schwartz, J. H., & Jessell, T. M. (2004). *Principles of Neural Science*. Nicosia: Broken Hill Editions Ltd (Greek edition).
- Lambert, K. G., & Kinsley, C. H. (Eds.) (2011). *Clinical Neuroscience: Psychopathology and the brain*. New York: Oxford University Press.
- Sinicola, R. S. & Peters-Strickland, T.S. (2008). *Basic Psychopharmacology for counselors and psychotherapists*. Patra: Gotsis Publications.