

Course code	Course title
PSY 106	NEUROPSYCHOLOGY II

SPRING SEMESTER 2023

Instructor: Alexandra Economou, Associate Professor

I.1 Course description

The course focuses on the neuroplastic properties of the brain in the context of the study of acquired, neurodegenerative and neurodevelopmental disorders. It covers the study of the basic mechanisms of neuroplasticity and the way in which the mechanisms may lead to dysfunctional neuroplasticity but also contribute to recovery. The course is divided into 6 units: Basic principles of neuroplasticity; Neuroplasticity of pain, vision, and audition; The neurodegenerative – progressive disorders (the dementias, Parkinson’s disease, multiple sclerosis); The developmental disorders; Rehabilitation. The course includes representative clinical case studies, the description of the symptoms that characterize each disorder or impairment, the pathophysiology of each disorder, mechanisms of neuroplasticity that contribute to the symptomatology and to remediation, prognosis, and therapeutic approaches.

Indicative programme of 12 weeks

WEEK TOPIC

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| 1 | Introduction: Basic principles of neuroplasticity I |
| 2 | Basic principles of neuroplasticity II |
| 3 | The neuroplasticity of pain |
| 4 | The neuroplasticity of vision and audition |
| 5 | The dementias I |
| 6 | The dementias II |
| 7 | Movement-Parkinson’s disease |
| 8 | Multiple sclerosis |
| 9 | Head injury and cerebrovascular accidents |
| 10 | Neuroplasticity and neurodevelopmental disorders |
| 11 | Rehabilitation I |
| 12 | Rehabilitation II |

Evaluation

The evaluation of the students is based on a written examination (40%) and on a paper based on scientific articles (60% of the grade). Instructions for the paper are provided separately.

II.1 Textbook

Doidge, N. (2016). *The brain's way of healing*. Penguin Books.

Additional bibliography

Research articles available in e-class and online.