

## Neurobiology of Disease (NEUR N5040)

Spring 2022: Thursdays 5:30-8:30

Room: Online only

Course Directors: Stella Elkabes Ph.D. ([elkabest@njms.rutgers.edu](mailto:elkabest@njms.rutgers.edu)); Kevin Beck Ph.D. ([kevin.d.beck@njms.rutgers.edu](mailto:kevin.d.beck@njms.rutgers.edu))

This course will focus on the molecular, cellular and behavioral mechanisms underlying neurological and psychiatric disorders. The course is organized into three subunits: psychiatric disorders (depression, schizophrenia, anxiety disorders & addiction); neurodegenerative diseases (Parkinson's Disease, Alzheimer's Disease, and epilepsy); central nervous system injury and neurodegenerative disorders affecting motor function (multiple sclerosis, ALS, Huntington's Disease, and spinal cord injury). Lectures will include an overview of affected neural systems, current research theories regarding etiology, molecular mechanisms and current therapeutic strategies.

Exams will be in essay and/or multiple choice format. Student presentations will coincide with each module of the class. Student course grades are equally weighted across the three exams and the presentation. Depending on the size of the course, student presentations may be individual or in pairs.

Readings are assigned each week by the lecturers.

DATE	TOPIC
Jan 6	Anxiety, PTSD, & Mood Disorders
Jan 13	Bipolar disorder & Schizophrenia
Jan 20	Substance Abuse Disorders
Jan 27	<i>Presentations: Exposure-induced disorders &amp; syndromes</i>
Feb 3	Exam I

Feb 10	Parkinson's Disease
Feb 17	Alzheimer's Disease
Feb 24	Epilepsy
<i>Mar 3</i>	<i>Presentations: Stroke &amp; Brain Tumors</i>
<b>Mar 10</b>	<b>Exam II</b>
Mar 17	Multiple Sclerosis
March 24	Amyotrophic lateral sclerosis and Huntington's disease
March 31	Spinal cord injury
<i>April 7</i>	<i>Presentations: TBI, Neuropathic pain</i>
<b>April 14</b>	<b>Exam III</b>