Psychology 462
Drugs and Behavioral Neuroscience

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Course Time:
Monday: 5:00-7:30pm

Course Description:
The aim of this course is to develop an introduction to the field of neuropsychopharmacology, which examines the integration of psychiatry and neuroscience. We will cover a basic introduction to neurochemistry, neuropharmacology and neuroanatomy. The second portion of the course will employ this knowledge to examine the neurobiological theories, animal models and psychotherapeutic drugs for various psychiatric disorders.
Readings:
Neuroscience/Biochemistry Handouts

Paper Package:


Grading:

30% Midterm Exam (February 28)
30% Review Paper (Due April 7)
30% Final Exam (date to be announced)
5% 2 Paper Critiques
5% Critique Presentation
Outline of the Term:

Jan 7: Neuronal Morphology, Conductance and Neurotransmitter Release
Jan 14: Neurotransmitter Receptors and Intracellular Signaling
Jan 21/28: Neurotransmitter Classes
Feb 4: Plasticity, Neuroanatomy and the Pharmacology of Recreational Drugs
Feb 11: Critique Presentations
Feb 25: Midterm Exam
Mar 3: Stress-Anatomy, Neurochemistry, Typology and Plasticity
Mar 10/17: Depression-Phenomenology & Subtypes, Neurobiology, Animal Models and Antidepressants
Mar 24: Easter Monday—No Class
Mar 31: Anxiety-Anxiety Disorders & Neurobiology, Animal Models & Anxiolytics; Psychopathology-Clinical Profile & Neurobiology
April 7: Critique Presentations, Course Summary and Paper Submissions
Past Topics for Review Paper:

Neurogenesis and Depression
The Serotonin 5-HT2A Receptor and Depression
Effects of GABA Drugs on Anxiety Behavior in the Elevated Plus Maze
Fatty Acids and Depression
Endocannabinoid Signaling in the Amygdala and Anxiety
The Role of Calcineurin in Extinction of Fear Memories
Depression and the Immune System
Sleep and Memory Consolidation
Chronic Mild Stress as an Animal Model of Depression
Glucocorticoid/Norepinephrine Interactions in Aversive Memory
The Role of the Hippocampus in HPA Axis Regulation
Cannabis and Schizophrenia: Mechanisms of Interactions
Serotonin and Psychopathy