

Behavioral Pharmacology 830:463 Spring 2011

Monday & Thursday 8:40-10:00 SEC 117

Dr. Bonnie Nolan Psychology 219

Office Hours By Appointment and Thursday 10:00 email: bonnieno@rci.rutgers.edu

Text (optional): Julien: A Primer of Drug Action (any edition)

Learning Goals:

Students will learn leading terms, concepts, theoretical perspectives, empirical findings, and historical trends in the subject of behavioral pharmacology. Students will be asked to use critical thinking, skeptical inquiry, and, when possible, the scientific approach to ask, answer and understand questions related to behavior and mental processes in the context of psychotropic drugs and brain pharmacology. Students will learn to apply psychological concepts and content to become engaged citizens.

In addition, student will learn the mechanisms behind psychoactive drugs, and the pharmacology of the illnesses these drugs are used to treat.

Current Academic Integrity Policy: <http://academicintegrity.rutgers.edu/integrity.shtml>

Violations include: cheating, fabrication, plagiarism, denying others access to information or material, and facilitating violations of academic integrity.

<u>Date</u>	<u>Topic</u>	<u>Chapters</u>
1/20	Introduction	

Part 1: Physiology, Behavioral Measures and General Pharmacology 1-3

1/24	Neurophysiology/Neuroanatomy	
1/27	Principles of Behavior Analysis	
1/31	Schedules of Reinforcement	
2/03	General Pharmacology	
2/07	Tolerance (Behavioral/pharmacological)	
2/10	Drug Discrimination	
2/14	Rate-Dependent Effects	
2/17	Mechanism of Action/Drug Effect	

2/21 Exam 1

Part 2: Sedative-Hypnotic Drugs and Antidepressants 4-9

2/24	Ethyl Alcohol: Pharmacology, Wernicke-Korsakoff Syndrome, Animal models of alcohol/drug self-administration substitution/choice place preference/classical conditioning/ schedule-induced	
2/28	Barbiturates, General Anesthetics, and Antiepileptics: VPA Animal Models: Autism and Parkinson's Disease	
3/03	Anxiolytics- Amino Acids: Models of Anxiety	
3/07	Antidepressants and drugs used to treat Bipolar Disorder: Animal Models of Depression: Norpinephrine, Serotonin Models of aggression	

03/10 Exam 2

Part 3: Topics in Therapeutic Intervention:

10,11,13-17,19

3/14-3/17: Spring Break/no class

3/21 Antipsychotics

3/24 Animal Models of Schizophrenia:

Chronic Amphetamine (rats, primates, humans)
(neuroleptic potency order)

3/28 Dopamine: Models of Parkinson's Disease

Methamphetamine/MPTP toxicity

Conditioned Avoidance

3/31 Nicotine: Mechanism of Action, Cessation Therapies and Animal Models

4/04 Child and Adolescent Psychopharmacology:

Animal Models of Developmental Disorders

4/07 Pain/Opiates (tail flick, hot plate)

4/11 Geriatric Psychopharmacology

Acetylcholine: Models of Alzheimer's

4/14 Herbal Medicines for Psychological Disorders

4/18 Film: The Case of the Frozen Addicts

4/21 Cannabinoid Agonists and Antagonists

4/25 Exam 3

4/28 Review: Optional fourth exam: See Below

5/02 *Optional fourth exam 8:40: 10:00 (Comprehensive make-up exam)

All exams will be in essay format. Your three highest grades will be used to determine your final grade. *Should you miss any of the first three exams, you must take the fourth. Exams are cumulative with respect to material on all previous exams.