PSCH 6315: Psychopharmacology  
Education Building Room 108  
Thursdays 3-5:50pm, Fall 2015

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Psychology 216B, PHONE  
Office Hours: Tuesday 10:00am-12noon

Course Description: A study of current topics and recent developments in the biochemical basis of psychopathology and related strategies of psychopharmacological intervention.

Course Outline

August 27  Psychopharmacology: Introduction and approach  
Chapter 1 - Basic Principles of Psychopharmacology

September 3  Neuroanatomy and the electrical properties of neurons  
Chapter 2 - Cellular basis of communication

10  Principles of Pharmacology: Pharmacokinetics and Pharmacodynamics  
Chapter 3 - Synaptic Transmission

17  Neurotransmission and signal transduction  
Chapter 4 - Signal Transduction in the Brain

24  Neurotransmitter systems: GABA, Glutamate, Acetylcholine, Monoamines  
Chapter 5 - Excitatory and Inhibitory Amino Acids  
Chapter 6 - Widely Projecting Systems: Monoamines, Acetylcholine, and Orexin

October 1  Neurotransmitter systems: Endogenous opioids and endogenous cannabinoids  
Chapter 7 - Neuropeptides  
Chapter 8 - Atypical Neurotransmitters

*Review: Chapters 1-8 for exam 1 (time permitting)

8  Exam 1

15  Drug use and abuse: The biology and behavioral pharmacology of reward  
Models of drug abuse/ theories of addiction
Stimulants: Cocaine, amphetamine, and emerging drugs (synthetic cathinones)

Chapter 16 - Reinforcement and Addictive disorders
Supplemental reading - TBD

22 (Flex)

Pain: opioids and cannabinoids
Synthetic cannabinoids
Chapter 11 - Pain
Supplemental reading

29 Alcohol, nicotine and caffeine
Chapter 16 - Reinforcement and Addictive disorders
Supplemental reading

November

5 Hallucinogenic drugs: LSD, DOM, DOI
Feeding behavior and obesity: emerging therapeutics
Chapter 10 - Neural and Neuroendocrine Control of the Internal Milieu
Pages 262-267 only
Supplemental reading

12 Mood disorders
Neuroendocrine system function
Chapter 10 - Neural and Neuroendocrine Control of the Internal Milieu
Pages 245 - 261
Chapter 15 - Mood and Emotion

19 Schizophrenia and bipolar disorder
Chapter 17 - Schizophrenia and Bipolar disorder

26 no class, thanksgiving break

December

3 Sleep disorders and seizure disorders
Chapter 13 - Sleep and Arousal
Chapter 19 - Seizure Disorders
*review exam 2 (Chapters 10, 11, 13, 15, 16, 19 and supplemental readings)

10    Finals week – Exam 2
16    Grades submitted to registrar

**Required Reading:**


2) Supplemental readings: Current research reports or scanned chapters from other texts provided at least 5-7 days prior to date of lecture discussion via email.

**Grading**

1) **Exams:** Exam 1 will be on October 8th and will cover all lectures and book chapters as well as other assigned readings up to that point. It is worth 35% of your final grade. Exam 2 will be during finals week and will cover all lectures and book chapters as well as other assigned readings in the second part of the class. It is worth 35% of your final grade.

2) **Article Summaries:** You will have to find, read and summarize two recent journal articles (2005-2015) about psychopharmacology that provide an update or an extension of material covered in the lecture or in the readings. Each summary must cover a different topic (one from each section of the class). Each summary is limited to two double-spaced pages (Calibri font, size 11, 1 inch margins) and is worth 5% of your final grade. It is required that you have prior approval from me for each article you intend to summarize. The PDF of the article must be submitted to me for approval no later than 5pm one week prior to the summary due date. The summaries will be due by 5pm on Friday September 25 and Monday November 30th. Late approvals or summaries will not be accepted.

3) **Overview** on “theory to practice” – you will need to provide an overview on the application of basic psychopharmacology to some clinical issue (for example: the biological treatment of mood disorders, the biology of obesity, the neurochemistry of learning and memory, epigenetics and stress). This overview should be no more than 600 words (double-spaced, Calibri font, size 11) and is worth 15% of your final grade. This is due by 5pm the day before the final exam (TBD). Late papers will not be accepted, but I am happy to discuss a draft of the paper if you provide it to me prior to the due date and with a minimum of 24 hours to review it and give you comments.

4) **Class participation:** ask questions, engage, and participate. This class is designed to be more of a conversation than a lecture. It is important that you ask questions and be a part of the discussions. Participation (including occasional pop quizzes to assess readings – could be either oral or written assessments) will be worth 5% of your final grade.

5) **Grading assignments:** A = 90-100, B = 80-89, C = 70-79, D = 60-69, F = 59-less

*Please note: reviews will take place during classtime only if time permits.

The syllabus is subject to change during the semester; pending time constraints. Please make sure I have your best email contact information, to insure you always have the most up to date version of the syllabus.