Attention!

This is a representative syllabus.

The syllabus for the course when you enroll may be different.

Use the syllabus provided by your instructor for the most up-to-date information. Please refer to your instructor for more information for the specific requirements for a given semester.

Feel free to contact the Psychology Advising Office for any questions regarding psychology courses either by email (psychadvising@osu.edu) or phone (614.292.5750).

Thank you!
Course Overview:
This course was designed to meet the needs and interests of two students who took Psychology 3313 (*Introduction to Behavioral Neuroscience*) during the Autumn Semester of 2015. It builds on material covered in that course, either by introducing material on new topics (e.g., *Learning, Memory and Cognition, Enzyme Cascades in Sensory Signaling, Cortical Mapping of Semantic and Phonemic Information*), or by elaborating the scope and technical detail of material on topics that were covered in Psych 3313 (e.g., *Psychopharmacology, Drug Addiction, Mental Disorders*).

Course Objectives:
Upon completion of this course, students will:
- Demonstrate an understanding of psychopharmacology appropriate for an undergraduate course in advanced behavioral neuroscience.
- Understand a range of fundamental biochemical and genetic mechanisms in neural function that are thought to be essential for understanding certain aspects of human behaviors.
- Likewise, understand mechanisms of neural function that underlie a range of neurological and behavioral disorders; e.g., stroke, epilepsy, CTE, schizophrenia, major depression and drug addiction.
- Evaluate the evidence in favor of behavioral, physiological and molecular genetic explanations of human behavior.
- Enhance skills in summarizing and presenting results of original studies in the neurosciences.

Assessment & Grading:
Grading will be based on a *Satisfactory/Unsatisfactory* scale. Meeting all expectation for the course will result in a *Satisfactory* grade.
Expectations:
Each student is expected to: 1) attend all meetings, prepare and present a cogent summary of one/half of the readings assigned for that week, 2) actively participate in all discussion at each meeting, 3) do additional, follow-up literature searches on the weekly topics and submit an annotated bibliography at the end of the semester documenting their findings.

Topics for the semester.

W1 Organizational meeting
W2 Psychopharmacology
   Carlson, Ch. 4
W3 Learning, Memory and Cognition
   First ½ Carlson, Ch. 13
W4 Learning, Memory and Cognition
   Second ½ Carlson, Ch. 13
W5 NMDA Receptors in Epilepsy, Stroke
   Various readings
W6 CTE & Alzheimer’s
   Various readings
W7 Auditory Cognition and Music
   3 selected readings from Oliver Sachs
W8 Drugs & Addiction
   Carlson, 2nd half of Ch. 18.
W9 Schizophrenia
   Readings on neurobiology and molecular genetics of synaptic pruning theory
W10 Vision & Enzyme Cascades in Signal Transduction
   Pugh, et al. review
W11 Molecular Genetics of Color Blindness
   Deeb, et al.; Neitz & Neitz
W12 Gene Therapy for Sensory Loss
W13 Language: Phonemic & Semantic Cortical Mappings
   Kanwisher, et al.; Shamma, et al.
W14 Williams Syndrome –
   Martens Review; Landau, et al.