

Physiological Psychology
Psychology 261 – Fall 2004 Course Outline

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Time: Tuesdays and Thursdays 1:00 pm – 2:20 pm MC 2066
Location: MC 2066

Teaching Assistants: to be announced in class

Course Web Page

http://www.arts.uwaterloo.ca/~jdanker/261_winter2004/261_index.htm

Lecture slides are available in powerpoint (large files to download), html (to read on-line) and in pdf notes form (these are also large but can be downloaded prior to class)

Courseware package

Handouts of the lecture slides are available as a course package from the bookstore. Note that the final version of lectures may change throughout the term – so the package should be used as a guide only.

Course Text

Neil R Carlson Physiology of Behaviour, 8th Edition, Pearson, Allyn & Bacon, 2004

Course Description and Aims

This course aims to introduce the student to the fundamental physiological processes underlying brain – behaviour relationships in humans. The course will cover cellular, neurochemical and neural network levels of analysis for human behaviour. Topics covered include: evolution, neuroanatomy, neurodevelopment, methods in neuroscience, sensory processing, motor control, vision, memory, neurological and psychiatric disorders.

Assessment

Lecture material and the course text will be examinable. Material will be examined in three sections with exams taking place in class (exams will be non-cumulative). Each section's exam will be worth 25%. There will be three to four quizzes taken in class making up 15% of the final grade. The final 10% of the grade will come from an assignment described below. The due date for the assignment will be October 21st.

Assignment

Students will be asked to make a one page advertisement “selling” something related to physiological psychology. This could be a drug, a hospital or specific treatment one could

receive in a hospital, a rehabilitation program, a drug for enhancing normal function (e.g., a memory enhancer) or anything else the student can conjure up so long as it relates to brain-behaviour relationships. The advertisement does not need to be a reality but must be based on plausible relationships and facts learned in class. That is, one could advertise a memory enhancer that doesn't currently exist but this fiction would need to relate to facts that we DO know about memory – which neural structures would your enhancer act upon? Which neurotransmitters? The advertisement should be mostly visual with only a small amount of supporting text totalling no more than 150 words. An example from the magazine Adbusters is provided below (there is no need for students to infuse their ad with this much sarcasm but if the mood takes you...).



This example also lacks any supporting text of the kind I am looking for – something that shows what you have learned about the brain-behaviour relationships relevant to your particular ad.

Lecture Schedule (subject to changes)

Section 1

Sep 14 th	Lecture 1	Introduction	
Sep 16 th , 21 st and 23 rd	Topic 1	Neuroanatomy and neurophysiology	CH 1 – 3
Sep 28 th	Topic 2	Evolution and the brain	no readings
Sep 30 th and Oct 5 th	Topic 3	Methods in Neuroscience	CH 5

***** Oct 7th Section 1 exam *****

Section 2

Oct 12 th and 14 th	Topic 4	Psychopharmacology and Drugs	CH 4 & 18
Oct 19 th	Topic 5	Neurodevelopment and developmental disorders	(no readings)
Oct 21 st and 26 th	Topic 6	Vision	CH 6
Oct 28 th , Nov 2 nd and 4 th	Topic 7	Audition, Somatosensation, Olfaction and Gustation	CH 7

***** Nov 9th Section 2 exam *****

Section 3

Nov 11 th and 16 th	Topic 8	Motor control and motor disorders	CH 8
Nov 18 th	Topic 9	Sleep	CH 9
Nov 23 rd	Topic 10	Sex	CH 10
Nov 25 th	Topic 11	Memory and learning	CH 13
Nov 30 th	Topic 12	Psychiatric disorders and dementias	CH 16 & 17

***** Dec 2nd Section 3 exam *****