Physiological Psychology

Psychology 362

Spring 1999

Instructor: Tracy Trevorrow, Ph.D.
Room: Henry Hall 202
Meeting times: Tuesday & Thursday 2:00 - 3:20
Office Hours: Keiffer-L 4:30 - 5:30 Monday & Wednesday or by appointment
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Texts

- Pinel, J. P. J. (1997). Biopsychology. (3rd ed). Boston: Allyn & Bacon.

Course Description

This course will prepare undergraduate students for graduate work in clinical psychology, health psychology, or related graduate level work as these programs relate to the subject matter of physiological psychology. As such this course will be perceived by most students as very demanding. I intend to review four main areas (1) neuroanatomy, (2) neurophysiology, (3) sensory, perceptual, and motor function, and (4) clinical syndromes. Topics are covered that are closely related to the clinical practice of psychology, such as learning and memory, psychiatric disorders, psychopharmacology, sleep, drug addiction, and self-regulation and biofeedback.

The course will include a variety of instructional methods including lecture and discussion, guest lecture, text reading and other assigned readings, video presentations, experience with biofeedback equipment, and field excursions. The amount of material to commit to memory (and hopefully understand) is daunting! As such, there will be frequent reviews of material. Repetition should promote your ability to retain information.

Objectives

This course is intended to promote ...

- basic understanding of psychophysiology, including knowledge of basic brain and spinal cord physiology, neuron structure and function, and pathways of sensory and motor information.
- familiarity with common neurological and neuropsychiatric disorders
- understanding of the implications of psychophysiology for the applied practice of psychology
- "hands-on" experience with technology used in self-regulation and biofeedback.
- understanding of the role of the clinical psychologist as a team member in the management of disorders that reflect psychophysiological dysfunction.

Your progress will be monitored and evaluated by the following…

- Participation and engagement in class. You will be expected to attend every session and to be prepared, having completed the required reading and other assignments.
- You will be quizzed frequently (see schedule of classes). Quizzes will include identifying anatomical features, drawing and reproducing diagrams of the nervous system, multiple choice and short answer questions.
- Mid-course evaluation: You will be asked to participate in a course evaluation.
- Final exam. This exam will cover the entire content of the course and will be similar in format to the quizzes (albeit longer)

I reserve the option to provide extra opportunities for you to earn points based on additional assignments. This option is for special circumstances and is not provided to make-up for poor performance.

Grading

Participation (30)	30
Tests (4 X 20)	80
Mid-semester evaluation	10
Final	40
Total	**160**

A = 144 +; B = 128→143; C = 112→ 142; D = 96 → 111

Course Schedule

(subject to change)

Class	Topics/Activities	Readings/Assignments
1/12	Dr. Kopf. Introduction: Syllabus Video: The Behaving Brain Knowledge Review	none
1/14	Dr. Kopf. Review Knowledge Review: The Behaving Brain Video: The Responsive Brain Knowledge Review	none
1/19	Psychology and the Central Nervous System (CNS) Assessment Strategies The Anatomy of the CNS: the Big Picture	p.50—53 directions p.62,63 spinal cord p.64 divisions & structures p.65—76
1/21	CNS Anatomy: the Big Picture, cont.	as above.
1/26	CNS anatomy: the Big Picture, cont.	as above
1/28	Cells of the nervous CNS: the Small Picture.	***Test # 1 CNS anatomy*** cells p.54--62
2/2	The Small Picture, cont Neural Conduction (bio-electrical)	membrane potentials p.81--90
2/4	Synaptic Transmission (bio-chemical)	synaptic transmission p.91--96 neurotransmitters p.97—98
2/9	Pharmacology	pharmacology p.99—103
2/11	The Small Picture, review	above
2/16	Vision (Light to Retina)	***Test # 2 CNS physiology*** p. 150—160

2/18	Vision (Retina to Occipital Cortex)	p. 161, 183—188
2/23	Audition	p.188—193
2/25	Touch, Pain	p. 193—201
3/2	Smell & Taste	p. 201—204
3/ 4	Sensory-Motor System	p.208—233
3/9	Clinical Assessment of Sensorium and Motor Skills	above
3/11	Review: Sensory & Motor Systems	*Test # 3 Sensory & Motor Systems*
3/16	Blood Supply & Stroke	
3/18	Excursion to Rehab Hospital	
3/23	Sleep & Sleep Disorders	
3/25	Excursion to Sleep Disorders Lab	
4/6	Epilepsy	
4/8	Excursion to Straub Clinic	
4/13	Pain	
4/15	Excursion to Chronic Pain Program	
4/20	Drug Addiction	
4/22	Treatment of Drug Addiction: Guest	
4/27	Review of Anatomy/Physiology	*Test # 4 Clinical Syndromes*
4/29	Review of Sensation/Motor and Clinical Syndromes	
5/3--6	Final	*Final Exam*