

SPLH 320: NEUROSCIENCE OF HUMAN COMMUNICATION
(2 CREDITS)
Fall 2009

Class Meetings: Tuesdays & Thursdays 2:30am-3:20pm (Dole 2094)

Instructors: Ed Auer, Jr. Ph.D.; auer@ku.edu; 864-1460 (Stewart Center, Haworth 4115)
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Office Hours:

Auer: Tuesday 12:30 –1:30, Thursday 10:00-10:50 & by appointment.

Venkatesan: Tuesdays 3:30-4:30 pm & by appointment.

Course Description

This course provides an introduction to basic neuroanatomy and neurophysiology as well as the methodologies used to investigate the functional neuroanatomy of human communication.

Objectives

1. Know basic neuroanatomy and neurophysiology relevant to human communication.
2. Have a basic understanding of perceptual systems in health and disease.
3. Understand the mechanisms of sensorimotor integration.
4. Identify neuroanatomical locations within an MRI volume of the human brain.
5. Become familiar with currently used research techniques in cognitive neuroscience.

Materials

Webster, B. (1999). *Neuroscience of Communication*, Second Edition, San Diego, Singular.

Calvin, W.H., & Ojemann, G.A. (1994). *Conversations with Neil's brain: the neural nature of thought and language*, Perseus Books.

Additional readings associated with lectures and other course materials will be made available on the Blackboard course website <http://courseware.ku.edu>

Requirements and Attendance Policy

Course grade will be based on four exams (80% of final grade), online quizzes (10% of final grade), and a digital anatomy assignment (10% of final grade). Students are expected to attend all regularly scheduled lectures. If you miss a lecture, it is your responsibility to obtain notes from one of your classmates.

Academic Misconduct

Students are expected to observe all University of Kansas guidelines pertaining to academic misconduct as stated in the University Senate Rules and Regulations (2.6.1):

“ Academic misconduct by a student shall include, but not be limited to, disruption of classes; threatening an instructor or fellow student in an academic setting; giving or receiving of unauthorized aid on examinations or in the preparation of notebooks, themes, reports or other assignments; knowingly misrepresenting the source of any academic work; unauthorized changing of grades; unauthorized use of University approvals or forging of signatures; falsification of research results; plagiarizing of another's work; violation of regulations or ethical

codes for the treatment of human and animal subjects; or otherwise acting dishonestly in research.”

<http://studenthandbook.ku.edu/codes.shtml#Academic%20Misconduct>

Accommodations

The Office of Disability Resources (DR), 22 Strong Hall, 785-864-2620 (v/tty), coordinates accommodations and services for KU students with disabilities. If you have a disability for which you may request accommodation in KU classes and have not contacted DR, please do so as soon as possible. Please also contact me privately in regard to this course.

If a scheduled exam or assignment due date is in conflict with a mandated religious observance, you must notify the instructor in writing (e-mail is acceptable) within one week of receiving this syllabus so that an alternative arrangement can be made in advance of the scheduled requirement.

Grading

The University of Kansas has prescribed definitions for grades. The University Senate Rules and Regulations define grades in the following way:

- 1.2.1.1 The grade of A will be reported for achievement of outstanding quality.
- 1.2.1.2 The grade of B will be reported for achievement of high quality.
- 1.2.1.3 The grade of C will be reported for achievement of acceptable quality.
- 1.2.1.4 The grade of D will be reported for achievement of minimally passing but less than acceptable quality.

In this course, the plus or minus system will be used to describe intermediate levels of performance between a maximum of A and a minimum of F. Intermediate grades represented by plus or minus shall be calculated as .3 units above or below the corresponding letter grade.

Quality of achievement will be evaluate through your performance on:

- Four exams 80% (each worth 20% of final grade)
- Online quizzes 10%
- Digital Anatomy 10%

If your level of achievement during this course is falling short of your goal, you are strongly encouraged to consult with the instructor during office hours or by appointment to improve the quality of your learning of course material.

Tentative Schedule

- 8/20 Introductions and Course Overview/ Basic Terminology (CH1 W) (CH1 C)
8/25-8/27 Historical Perspective / Cellular organization (CH2 W) (CH2, 3 C)
9/1-9/3 Cellular organization / Cellular signaling (CH2 W) (CH4 C)
9/8-9/10 Gross anatomy and Blood supply (CH3 W) (CH5 C)
9/15 **EXAM 1**
9/17 Internal Organization of the Spinal Cord and Hindbrain (CH4 W) (CH6 C)
9/22-9/24 Internal Organization of the Spinal Cord and Hindbrain (CH4 W) (CH7 C)
9/29-10/1 Somatosensory System(CH6 W) (CH8 C)
10/6-10/8 Somatosensory System + Motor systems (CH8 C)
10/13 Motor Systems (CH12 W) (CH9 C)
10/15 FALL BREAK
10/20 Review
10/22 **EXAM 2**
10-27-10/29 Sensory systems (CH6 W) (CH 10, 11 C)
11/3-11/5 Sensory systems (CH6 W) (CH12 C)
11/10-11/12 Vestibular system (CH7 W) (CH13 C)
11/17 Vestibular system (CH7 W) (CH13 C)
11/19 **EXAM 3**
11/24 Auditory System (CH8 W) (CH14 C)
12/1-12/3 Auditory System + Cochlear implants (CH9 W) (CH15,16 C)
12/8-12/10 Brain Imaging Methods (CH17 C)
Finals Week **EXAM 4** (Refer to finals schedule)