HDE 163 - COGNITIVE NEUROPSYCHOLOGY in ADULTHOOD & AGING (version: Jan 3, 2020); U.C. Davis, Winter Quarter, 2020
Instructor: Professor Beth A. Ober
Time/Place of class: Monday 2:10 pm - 4:00 pm, Olson 158
Prof. Ober’s Office Hours: Wednesday, 12:30-1:30 & Thursday, 4:15-5:15 (during weeks of instruction)
Ober's Office: 1357 Hart Hall
Ober's email address: baober@ucdavis.edu
Ober's phone number: 530-752-6934
Teaching Assistant: Helen Fann; hfann@ucdavis.edu
Helen Fann's Office Hours: Monday, 11:00-12:00 & Friday, 10:00-11:00

Course Goals. Students will be exposed to theories, methods, and findings from cognitive neuropsychology and cognitive neuroscience, with an emphasis on comparing and contrasting differences between normal and abnormal aging. The reading assignments and lectures will be enhanced via case study presentations (presented via slides & video) of brain-damaged patients (e.g., with amnesia, aphasia, Alzheimer’s disease) and via slide presentations of neuroimaging studies with groups of younger and/or older adults engaged in specific cognitive tasks. Students will be expected to: (a) acquire a working knowledge of the relationship between cognitive processes and brain functioning in adulthood & aging; (b) understand the mutual benefits of neuropsychological case studies, group data from similar types of brain-damaged individuals, and group data from normal adults; (c) become competent in asking critical questions about brain-cognition relationships; and (d) write a short research paper that compares and contrasts two alternative treatments for a neurocognitive issue/disorder in adulthood.

Prerequisites. The only prerequisite for this course is PSC 1. HDE 100C (Adult Development and Aging) is recommended, but not required. Although no prior coursework in cognitive psychology or neurosciences is required, the course will be appropriate for students who have such background as well as for those who do not have such background.

Course Website. The HDE 163 course website can be found on UCD Canvas. The website contains the course syllabus and handouts, as well as the assigned readings/articles that are not in the course textbook. The website will also contain the lecture slides. The instructor will usually put the lecture slides onto the website by the late evening of the day prior to each class meeting; however, these slides may deviate slightly from the slides actually used in lecture (i.e., the instructor may make some last-minute changes). It is also important for students to realize that the lecture slides comprised of text (as opposed to pictures/figures) consist of the outlines (i.e., key points) for the topics being discussed. Thus, the slides, by themselves, will not be an adequate alternative for attending, and taking notes in, class sessions.


Two copies of this textbook will also be available at the 2-Hour Reserve Desk in Shields Library.

Additional Readings. As listed in the syllabus, and provided on the course website, you will have additional required (and some recommended) readings, which are comprised of book chapters and journal articles.

Grading Percentages and Course Requirements. Letter grades will be assigned based on the following components: quiz - 10%; midterm - 25%; final - 40%; term paper - 25%. Approximately 70-80% of the final exam will focus on material covered during the second half of the quarter; however, there will also be some questions from the first half of the quarter with an emphasis on concepts that occurred throughout the quarter. There are no alternate dates for the exams. Missed exams will be given "0" points, unless the student has a valid medical or personal emergency for which appropriate documentation is provided (e.g., letter from physician). In the event of a valid medical/personal emergency, it is up to the discretion of the instructor as to whether a special make-up exam will be given, or the grades of the other course components will be re-weighted to make up for the missing exam.

Term Paper. For the term paper, worth 25% of the graded points, and which is due as an upload to UCD Canvas on **March 1, at 11:30pm**, you will write a six-page paper that contrasts & compares two different treatments for one type neurocognitive disorder (e.g., a specific type of aphasia, a specific type of memory disorder, Alzheimer’s disease, etc.) or neurocognitive issue (e.g., episodic memory, divided attention, word-finding, etc., in normal aging). This six-page paper can be no less than 5.5, and no more than 6.5, double-spaced, 12-point-font, pages. You may use class-assigned material, but you must refer to at least four additional sources/references from the research literature, including at least two references for each of the two treatments/therapies that you will be discussing. These four, total, additional references must all come from primary sources (i.e., empirical or review papers published in peer-reviewed academic journals). The **March 1, 11:30pm**, deadline is firm; late papers will be penalized at the rate of 10% of the points for the first day that the paper is late, and 10% of the points for each additional day that the paper is late. Note that a special handout will be made available on Canvas, containing more detailed instructions for the term paper.

**CODE of ACADEMIC CONDUCT**

All UCD course syllabi must provide a link to (or the complete text of) the Code of Academic Conduct. "This Code of Academic Conduct exists to support high standards of behavior and to ensure fair evaluation of student learning. Students who violate the Code of Academic Conduct are subject to disciplinary sanctions that include censure, probation,
suspension, deferred separation or dismissal from the University of California." The prior sentence is quoted from introductory section of the Code of Academic Conduct document. For the full document, please go to the following link:  http://sja.ucdavis.edu/files/cac.pdf

CLASS SCHEDULE & REQUIRED READINGS

January 6 (Mon.) - Introduction to Course


Required Reference Chapter:
Coltheart, M. (2001). Assumptions and methods in cognitive neuropsychology. In B. Rapp (Ed.), The Handbook of Cognitive Neuropsychology (pp. 3-21). Philadelphia, PA: Psychology Press. [The Coltheart chapter will be a valuable reference; you will likely want to return to this chapter throughout the quarter, including during the writing of your paper.]

January 8 (Wed.) - Structural Brain Changes and Aging


Recommended:

January 13 (Mon.) - Functional Brain Changes and Aging

[repeated reading from previous class session]

as well as to "Structural Brain Changes and Aging"

Gazzaniga, M. S., Ivry, R. B., & Mangun, G. R. (2009). *Cognitive Neuroscience: The Biology of the Mind (3rd Edition)*. New York, NY: W. W. Norton & Company, pages 130-133; 141-159. [These pages are among those in the PDF posted on UCD Canvas; this reading is of the "reference-type"; you will probably want to re-read sections of it throughout the quarter.]

Recommended:  

**January 15 (Wed.) - Overview of Cognitive Changes with Normal Aging; Neurocognitive Scaffolding**


Recommended:  

**January 20 - NO CLASS - UCD HOLIDAY**

**January 22 (Wed.) - Alzheimer’s Disease and other Dementias**


Recommended:  

**January 27 (Mon.) - Stroke; Huntington’s & Parkinson’s Disease**

Kempler, D. (2012). *Neurocognitive Disorders in Aging*. Chapter 3, and Chapter 13, pages 227-236 only, i.e., section labeled "Subcortical Movement Disorders".

Recommended:  
January 29 (Wed.) - Language in Normal Aging; Aphasia


Recommended:
Tremblay, P. and Dick, A. S. Broca and Wernike are dead, or moving past the classic model of language neurobiology. *Brain & Language, 162*, 60-71.


February 3 (Monday) - Graded QUIZ (covering all of January's lectures & required readings)

February 3 (Mon.) - Visuospatial Deficits and Agnosia: Part I


February 5 (Wed.) - Visuospatial Deficits and Agnosia: Part II


February 10 (Mon.) - Frontal Lobe & Executive Functions: Part I


February 12 (Wed.) - Frontal Lobe & Executive Functions: Part II


**February 17 (Mon.) - NO CLASS - UCD HOLIDAY**

**February 19 (Wed.) - MIDTERM EXAM**
Please bring a scantron form, and a #2 pencil.

**February 24 (Mon.) - Memory and Aging**


Ober, B.A. (2010). Memory, brain and aging: The good, the bad and the promising. *California Agriculture, 64*, 174-182. [This is a general-audience review article, which is part of a special issue on “California Aging”.
Please download the PDF of the article from: http://calag.ucanr.edu/archive/?type=pdf&article=ca.v064n04p174

Recommended:


**February 26 (Wed.) - Amnesia; Hyperthymestic Syndrome**


**MARCH 1 (SUNDAY) -- TERM PAPER DUE -- (must be successfully uploaded to UCD Canvas by 11:30pm)**

**March 2 (Mon.) - Neuropsychological Assessment**

March 4 (Wed.) - Successful Cognitive Aging: Part I - Physical Exercise/Activity


March 9 (Mon.) - Successful Cognitive Aging: Part II - Mental Exercise/Activity


Recommended:

March 11 (Wed.) - Successful Cognitive Aging: Part III - Social Activity; Part IV - Nutrition


Recommended:
MARCH 17 (Tuesday), 6:00 - 8:00pm - FINAL EXAM (please bring a Scantron form and a #2 pencil)