



**Department of Psychology**  
**Sensory Perceptual and Cognitive Aspects of Aging**  
**Psychology 455 (L01) – Winter 2007**

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<b>Instructor:</b>	<b>Charles T. (Chip) Scialfa</b>	<b>Lecture Location:</b>	<b>SH 0157</b>
<b>Phone:</b>	<b>220-4951</b>	<b>Lecture Days/Time:</b>	<b>T TH at 11 -12:15</b>
<b>Email:</b>	<a href="mailto:scialfa@ucalgary.ca">scialfa@ucalgary.ca</a>		
<b>Office:</b>	<b>Admin. 151B</b>		
<b>Office Hours:</b>	<b>TBA</b>		

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### **Course Description and Goals**

A major goal of the course is to provide you with an advanced understanding of experimental aging research and theory. Just as importantly, it is my hope that through this course, you'll learn to evaluate and express ideas both orally and in writing, to synthesize work from different studies and areas, and to critique the literature. It is not a lecture course, but more along the lines of a seminar. In that sense, it is your class and what you get out of it depends on you.

### **Required Text**

There is no textbook for this course. Readings (see attached list) have been copied and packaged and are available for purchase at the Psychs office (Admin. 170).

### **Evaluation**

There will be one in-term essay exam, counting for 25% of your final mark. There is a 24-hour take home essay exam at the end of the term that also counts for 25% of your mark. There is a term paper (APA style, approximately 30 pages with approximately 25-30 references) that is worth 25% of your mark. To help you in preparing for the writing of this paper, at about the midway point in the term, you must turn in and revised a two-page prospectus that includes reference to the extant literature. This will count for 10% of your mark and the revision of this prospectus is worth 5%.. The remaining 10% will be from periodic in-class writing assignments.

### **Grading Scale**

A+	96-100%	B+	80-84%	C+	67-71%	D+	54-58%
A	90-95%	B	76-79%	C	63-66%	D	50-53%
A-	85-89%	B-	72-75%	C-	59-62%	F	0-49%

As stated in the University Calendar, it is at the instructor's discretion to round off either upward or downward to determine a final grade when the average of term work and final examinations is between two letter grades.

To determine final letter grades, final percentage grades will be rounded up or down to the nearest whole percentage (i.e., 89.5% will be rounded up to 90%; 89.4% will be rounded down to 89%, etc.).

## Lecture Schedule

**Winter 2007 – Lecture Schedule**  
(January 2 – April 26)  
TR - (Tuesday, Thursday)

DATE		
Jan. 2	Block Week (Jan. 2-6)	
Jan. 8	Winter Session lectures begin.	
Jan. 9.	Methods	
Jan. 11	Methods	
Jan. 16	Methods Writing Exercise	2%
Jan. 18	Sensation and Perception	
<b>Jan. 19</b>	<b>Last day for Winter registration and change of registration.</b> Sensation and Perception	
Jan. 23	Sensation and Perception Writing Exercise	2%
Jan. 25	Attention	
Jan. 30	Attention	
Feb. 1	Attention Writing Exercise	2%
Feb. 6	Reaction Times	
Feb. 8	Reaction Times	
Feb. 13	Reaction Times Writing Exercise	2%
<b>Feb. 15</b>	<b>Essay Exam 1</b>	25%
<b>Feb. 18-25</b>	<b>No classes – Reading Week</b>	
Feb. 27	Term Paper Prospectus Due and Reviewed	10%
March 1	Term Paper Prospectus Revised	5%
March 6	Catch up Date	
March 9	Language Processing (No readings)	
March 8	Learning	
March 13	Learning	
March 15	Learning	
March 20	Learning Writing Assignment	2%
March 22	Memory	
March 27	Memory	
<b>March 29</b>	<b>TERM PAPER DUE</b> Memory	25%
April 3	Memory	
April 5	Intelligence	
April 10	Intelligence	
April 12	Intelligence	
<b>April 13</b>	<b>Take Home Essay Exam 2</b> <b>Last day of lectures for Winter Session. Last day to withdraw from full courses and Winter Session half courses.</b>	<b>25%</b>
April 16-26	NO FINAL EXAM	

## **University of Calgary Curriculum Objectives**

Critical and creative thinking  
Analysis of problems  
Effective written communication  
Abstract reasoning and its applications  
A defined interdisciplinary component  
Integration of research

### **Reappraisal of Grades**

A student who feels that a piece of graded term work (term paper, essay, test, etc.) has been unfairly graded, may have the work re-graded as follows. The student shall discuss the work with the instructor within fifteen days of being notified about the mark or of the item's return to the class. If not satisfied, the student shall immediately take the matter to the Head of the department offering the course, who will arrange for a reassessment of the work within the next fifteen days. The reappraisal of term work may cause the grade to be raised, lowered, or to remain the same.

If the student is not satisfied with the decision and wishes to appeal, the student shall address a letter of appeal to the Dean of the faculty offering the course within fifteen days of the unfavourable decision. In the letter, the student must clearly and fully state the decision being appealed, the grounds for appeal, and the remedies being sought, along with any special circumstances that warrant an appeal of the reappraisal. The student should include as much written documentation as possible.

### **Plagiarism and Other Academic Misconduct**

Intellectual honesty is the cornerstone of the development and acquisition of knowledge and requires that the contribution of others be acknowledged. Consequently, plagiarism or cheating on any assignment is regarded as an extremely serious academic offense. Plagiarism involves submitting or presenting work in a course as if it were the student's own work done expressly for that particular course when, in fact, it is not. Students should examine sections of the University Calendar that present a Statement of Intellectual honesty and definitions and penalties associated with Plagiarism/Cheating/Other Academic Misconduct.

### **Academic Accommodation**

*It is the student's responsibility to request academic accommodations.* If you are a student with a documented disability who may require academic accommodation and **have not** registered with the Disability Resource Centre, please contact their office at 220-8237. Students who have not registered with the Disability Resource Centre are not eligible for formal academic accommodation. You are also required to discuss your needs with your instructor no later than fourteen (14) days after the start of this course.

### **Absence From A Test**

Make-up exams are NOT an option without an official University medical excuse (see the University Calendar). You must contact the instructor before the scheduled examination or you will have forfeited any right to make up the exam. At the instructor's discretion, a make-up exam may differ significantly (in form and/or content) from a regularly scheduled exam. Except in extenuating circumstances (documented by an official University medical excuse), a makeup exam is written within two (2) weeks of the missed exam.

A completed Physician/Counselor Statement will be required to confirm absence from a test for health reasons. The student will be required to pay any cost associated with the Physician Counselor Statement.

### **Student Organizations**

Psychology students may wish to join the Psychology Undergraduate Students' Association (PSYCHS). They are located in the Administration building, room 170 or may be contacted at 220-5567.

**Student Union VP Academic:** Phone: 220-3911 [suypaca@ucalgary.ca](mailto:suypaca@ucalgary.ca)

**Student Union Faculty Rep.:** Phone: 220-3913 [socialscirep@su.ucalgary.ca](mailto:socialscirep@su.ucalgary.ca)

### **Important Dates**

The last day to drop this course and **still receive a fee refund** is January 19<sup>th</sup>, 2007. The last day to withdraw from this course is April 13<sup>th</sup>, 2007.

## PSYC 455

### Sensory, Perception, and Cognitive Aspects of Aging

#### Readings List

#### Methodology

- Collins, L.M. (1996). Measurement of change in research on aging: Old and new issues from an individual growth perspective. In J.E. Birren & K.W. Schaie (Eds.). *Handbook of the psychology of aging (4th ed.)* (pp. 38-56). New York: Academic Press.
- Wohwill, J.F. (1970). The age variable in psychological research. *Psychological Bulletin*, 77, 49-64.
- Kausler, D.H. (1982). Factorial Designs with experimental variables: Process-oriented research In *Experimental psychology and human aging* (pp. 177-231). New York: Wiley.
- Nesselroade, J.R. (1986). Sampling and generalizability: Adult development and aging research issues examined within the general methodological framework of selection. In K.W. Schaie, R.T. Campbell, W.M. Meredith, & S.C. Rawlings (Eds.), *Methodological issues in aging research* (pp. 13-42). New York: Springer.

#### Sensation and Perception

- Schneider, Bruce A; Pichora-Fuller, M. Kathleen. (2000). Implications of perceptual deterioration for cognitive aging research. In F. Craik & T. Salthouse (Eds), *The handbook of aging and cognition (2nd ed.)* (pp. 155-219). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Scialfa, C.T., Adams, E.M., & Giovanetto, M. (1991). Reliability of the Vistech Contrast Test System in a life-span adult sample. *Optometry and Vision Science*, 68, 270-274.
- Scialfa, C.T., Guzy, L.T., Leibowitz, H.W., Garvey, P.M., & Tyrrell, R.A. (1991). Age differences in estimating vehicle velocity. *Psychology and Aging*, 6, 60-66.
- Scialfa, C.T., Kline, D.W., & Wood, P.K. (2002). Structural modeling of contrast sensitivity in adulthood. *Journal of the Optical Society of America A*, 19, 158-165.
- Yonan, Cynthia A. & Sommers, Mitchell S. (2000). The effects of talker familiarity on spoken word identification in younger and older listeners. *Psychology & Aging*, 15(1), 88-99.

#### Attention

- Giambra, L.M., & Quilter, R.E. (1988). Sustained attention in adulthood: A unique, large-sample, longitudinal and multicohort analysis using the Mackworth Clock Test. *Psychology and Aging*, 7, 654-660.
- Li, K., Lindenberger, U., Freune, A., & Baltes, P. (2001). Walking while memorizing: Age-

related differences in compensatory behavior. *Psychological Science*, 12, 230-237.

McDowd, J., & Shaw, R. (2000). Attention and aging: A functional perspective. In F. Craik & T. Salthouse (Eds.), *Handbook of aging and cognition* (pp.221-292). Mahwah, NJ: Erlbaum.

Meiran, N., Gotler, A., & Operlman, A. (2001). Old age is associated with a pattern of relatively intact and relatively impaired task-set switching abilities. *Journal of Gerontology: Psychological Sciences*, 56B, P88-P102.

Owsley, C., Ball, K., Sloane, M., Roenker, D., & Bruni, J. (1991). Visual/cognitive correlates of vehicle accidents in older drivers. *Psychology and Aging*, 5, 403-415.

Scialfa, Charles T; Joffe, Kenneth M. (1997). Age differences in feature and conjunction search: Implications for theories of visual search and generalized slowing. *Aging Neuropsychology & Cognition*, 4(3), 227-246.

### General Slowing

Cerella, J. (1990). Aging and information processing rate. In J.E. Birren & K.W. Schaie (Eds.), *Handbook of the psychology of aging (3rd ed.)*(pp. 201-221). San Diego, CA: Academic Press.

Lawrence, Bonnie, Myerson, Joel, & Hale, Sandra (1998). Differential decline of verbal and visuospatial processing speed across the adult life span. *Aging Neuropsychology & Cognition*, 5(2), 129-146.

Myerson, J., Wagstaff, D., & Hale, S. (1994). Brinley plots, explained variance and the analysis of age differences in response latencies. *Journal of Gerontology: Psychological Sciences*, 49, P72-P80.

Perfect, Timothy J & Maylor, Elizabeth A. (2000). Rejecting the dull hypothesis: The relation between method and theory in cognitive aging research. In T. Perfect & E. Maylor (Eds.), *Models of cognitive aging. Debates in psychology* (pp. 1-18). New York: Oxford University Press.

Scialfa, Charles T., Esau, Shane P., & Joffe, Kenneth M. (1998). Age, target-distractor similarity, and visual search. *Experimental Aging Research*, 24(4), 337-358.

### Learning, Skill Acquisition & Expertise

Anandam, Benedict T. & Scialfa, Charles T. (1999). Aging and the development of automaticity in feature search. *Aging Neuropsychology & Cognition*, 6(2), 117-140.

Botwinick, J. (1978). Learning and performance and Aids and types of learning. In *Aging and behavior (2nd ed.)* (pp. 261-310). New York: Springer.

Charness, Neil & Bosman, Elizabeth A. (1990). Expertise and aging: Life in the lab. In T.M.

Hess (Ed.), *Aging and cognition: Knowledge organization and utilization. Advances in psychology* (pp. 343-385). Amsterdam: North Holland.

Morrow, Daniel G., Leirer, Von O., & Altieri, Patsy A. (1992). Aging, expertise, and narrative processing. *Psychology & Aging, 7*(3), 376-388.

Rogers, W.A. (1992). Age differences in visual search: Target and distractor learning. *Psychology and Aging, 7*, 526-535.

Scialfa, Charles T., Jenkins, Lisa, Hamaluk, Eleanor, & Skaloud, Petra (2000). Aging and the development of automaticity in conjunction search. *Journals of Gerontology Series B-Psychological Sciences & Social Sciences, 55B*(1), P27-P46.

### Memory

Bowles, Nancy L. (1994). Age and rate of activation in semantic memory. *Psychology & Aging, 9*(3), 414-429.

Brosseau, Julie & Cohen, Henri (1996). The representation of semantic categories in aging. *Experimental Aging Research, 22*(4), 381-391.

Craik, F.I.M. (1977). Age differences in human memory.. In, J.E. Birren & K.W. Schaie (Eds.). *Handbook of the psychology of aging (1st ed.)* (pp. 384-420). New York: van Nostrand.

Rybash, John M. (1996). Memory aging research: Real-life and laboratory relationships. *Applied Cognitive Psychology, 10*(3), 187-191.

Salthouse, T.A. (1994). The aging of working memory. *Neuropsychology, 8*, 535-543.

Schacter, Daniel L., Koutstaal, Wilma, Johnson, Marcia K., Gross, Mara S. et al. (1997). False recollection induced by photographs: A comparison of older and younger adults. *Psychology & Aging, 12*(2), 203-215.

### Intelligence

Baltes, P.B. (1993). The aging mind: Potential and limits. *The Gerontologist, 33*, 580-594.

Baltes, P.B., & Lindenberger, U. (1988). On the range of cognitive plasticity in old age as a function of experience: 15 years of intervention research. *Behavior Therapy, 19*, 283-300.

Hertzog, C. (1989). The influence of cognitive slowing on age differences in intelligence. *Developmental Psychology, 25*, 636-651.

Horn, J.L. (1982). The theory of fluid and crystallized intelligence in relation to concepts of cognitive psychology and aging in adulthood. In F.I.M Craik & S. Trehub (Eds.), *Aging and cognitive processes* (pp. 237-278). New York: Plenum.

Horn, John L. & Masunaga, Hiromi (2000). New directions for research into aging and intelligence: The development of expertise. In T. Perfect & E. Maylor (Eds), *Models of cognitive aging: Debates in psychology* (pp. 125-129). New York: Oxford University

Press.

Lindenberger, U. & Baltes, P.B. (1994). Sensory functioning and intelligence in old age.  
*Psychology and Aging, 9*, 339-355.