



Psychology 455	Sensory, Perceptual and Cognitive Aspects of Aging	Winter 2013
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Instructor:	Chip Scialfa	Lecture Location:	SH 157
Phone:	403-220-4951	Lecture Days/Time:	T TH 14:00 – 15:15
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Office:	A251		
Office Hours:	TBA		

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 a lecture course and a seminar. In that sense, it is your class and what you get out of it depends on you.

Prerequisites

Psyc 205 – Principles of Psychology

Psyc 353 – Psychology of Aging

Required Text

There is no text for the course. See the attached list for readings, both required and supplemental.

Evaluation

There will be one in-term essay exam, counting for 25% of your final mark. There is a term paper (APA style, approximately 30 pages with approximately 25-30 references) that is worth 40% 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 revise 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 20% will be from periodic in-class writing assignments. There are 6 of them. You can drop the lowest mark of these and each of the remaining 5 is worth 4%. Because everyone can drop the lowest mark of the writing assignments, there will be no "make-up" if you miss them.

Late papers and prospectuses will be reduced by 3% for each day late. The term paper, prospectus and revised prospectus must be turned in by the due date no later than 5 p.m. in person and via email.

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 (e.g., 89.5% will be rounded up to 90% = A but 89.4% will be rounded down to 89% = A-).

Tentative Lecture Schedule

Date	Topic/Activity/Readings/Due Date
T Jan 8	Winter Term Lecture Begins. Methods
R Jan 10	Methods
T Jan 15	Methods
R Jan 17	Writing Assignment 1 – Describe an Experimental Aging Study: Cost is not Important
F Jan 18	Last day to drop Winter Term courses.
M Jan 21	Last day to add or swap Winter Term courses.
T Jan 22	Sensation and Perception
R Jan 24	Sensation and Perception
T Jan 29	Sensation and Perception
R Jan 31	Writing Assignment 2 – Design a Web Page for Older Adults
T Feb 5	Attention
R Feb 7	Attention
T Feb 12	Attention
R Feb 14	Writing Assignment 3 – Does Attention Change with Age?
T Feb 19	Reading Week. No Lecture
R Feb 21	Reading Week. No Lecture
T Feb 26	Reaction Time Term Paper Prospectus Due
R Feb 28	Reaction Time
T Mar 5	Reaction Time
R Mar 7	Reaction Time Writing Assignment 4 – Generalized Slowing: A Unified Theory of Cognitive Aging
T Mar 12	Learning
R Mar 14	Learning
T Mar 19	Learning

R Mar 21	Learning Writing Assignment 5 – Teaching an Old Dog New Tricks
T Mar 26	Memory Prospectus Revision Due
R Mar 28	Memory
T Apr 2	Memory
R Apr 4	Memory
T Apr 9	Memory Assignment 6 – Distinguishing Normal and Abnormal Memory Deficits in Older Adults
R Apr 11	Intelligences
T Apr 16	Intelligences Winter Lectures End. Last day to participate in research and allocate research credits. Last day to withdraw. Term Paper Due
F Apr 19-30	Winter Term Final Exams No Final Exam

Reappraisal of Grades

A student who feels that a piece of graded term work (e.g., term paper, essay, test) has been unfairly graded, may have the work re-graded as follows. The student shall discuss the work with the instructor within 15 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 15 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 15 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 403-220-8237. 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 14 days after the start of this course.

Absence From A Test/Exam

Makeup tests/exams are NOT an option without an official University medical excuse (see the University Calendar). A completed Physician/Counselor Statement will be required to confirm absence from a test/exam for health reasons; the student will be required to pay any cost associated with this Statement. Students who miss a test/exam have 48 hours to contact the instructor and to schedule a makeup test/exam. Students who do not schedule a makeup test/exam with the instructor within this 48-hour period forfeit the right to a makeup test/exam. At the instructor's discretion, a makeup test/exam may differ significantly (in form and/or content) from a regularly scheduled test/exam. Except in extenuating circumstances (documented by an official University medical excuse), a makeup test/exam must be written within 2 weeks of the missed test/exam.

Freedom of Information and Protection of Privacy (FOIP) Act

The FOIP legislation disallows the practice of having student's retrieve tests and assignments from a public place. Therefore, tests and assignments may be returned to students during class/lab, or during office hours, or via the Department Office (Admin 275), or will be made available only for viewing during exam review sessions scheduled by the Department. Tests and assignments will be shredded after one year. Instructors should take care to not link students' names with their grades, UCIDs, or other FOIP-sensitive information.

Evacuation Assembly Point

In case of an emergency evacuation during class, students must gather at the designated assembly point nearest to the classroom. The list of assembly points is found at <http://www.ucalgary.ca/emergencyplan/assemblypoints>
Please check this website and note the nearest assembly point for this course.

Student Organizations

Psychology students may wish to join the Psychology Undergraduate Students' Association (PSYCHS). They are located in Administration 170 and may be contacted at 403-220-5567.

Student Union VP Academic: Phone: 403-220-3911

suypaca@ucalgary.ca

Student Union Faculty Rep.:

Phone: 403-220-3913

socialscirep@su.ucalgary.ca

Important Dates

The last day to drop this course with no “W” notation and **still receive a tuition fee refund** is **January 18, 2013**. Last day for registration/change of registration is **January 21, 2013**. The last day to withdraw from this course is **Apr 16th, 2013**.

Readings List

PSYC 455 Sensory, Perception, and Cognitive Aspects of Aging Course Readings

Winter, 2013

Methodology

- Anstey, Kaarin J; Hofer, Scott M; Luszcz, Mary A. (2003). A Latent Growth Curve Analysis of Late-Life Sensory and Cognitive Function Over 8 Years: Evidence for Specific and Common Factors Underlying Change. [References]. *Psychology and Aging*. Vol.18(4), Dec 2003, pp. 714-726.
- Rast, Philippe; MacDonald, Stuart W. S; Hofer, Scott M. (2012). Intensive measurement designs for research on aging. [References]. *GeroPsych: The Journal of Gerontopsychology and Geriatric Psychiatry*. Vol.25(2), Jun 2012, pp. 45-55.
- Scialfa, C., Ference, J., Boone, J., Tay, R., & Hudson, C. (2010). Predicting older adults' driving difficulties using the Roadwise Review. *Journal of Gerontology: Psychological Sciences*, 65B, 434-437.
- Scialfa, C.T., Kline, D.W., & Lyman, B.J. (1987). Age differences in target identification as a function of retinal location and noise level: Examination of the useful field of view. *Psychology and Aging*, 2, 14-19.
- Wohlwill, J.F. (1970). The age variable in psychological research. *Psychological Review*, 77(1), 49-64.
- Nesselroade, John R; Ford, Donald H. (1985). P-technique comes of age: Multivariate, replicated, single-subject designs for research on older adults. *Research on Aging*. Vol.7(1), 1985, pp. 46-80.

Supplemental

- 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.

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

Scialfa, C.T. (2002). The role of sensory factors in cognitive aging research. *Canadian Journal of Experimental Psychology*, 56, 153-163.

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.

Tun, Patricia A; O'Kane, Gail; Wingfield, Arthur. (2002). Distraction by competing speech in young and older adult listeners. [References]. *Psychology and Aging*. Vol.17(3), Sep 2002, pp. 453-467.

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.

Supplemental

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.

Attention

Brache, K., Scialfa, C., & Hudson, C. (2010). Aging and vigilance: Who has the inhibition deficit?

Experimental Aging Research, 36, 140-152.

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(3), 230-237.

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, C. T., & Joffe, K. 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.

Supplemental

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: Earlbaum.

General Slowing

Lawrence, B., Myerson, J., & Hale, S. (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.

Salthouse, Timothy A. (1996).The processing-speed theory of adult age differences in cognition. [References]. *Psychological Review*. Vol.103(3), Jul 1996, pp. 403-428.

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

Supplemental

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.

Perfect, T. J. & Maylor, E. 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.

Learning, Skill Acquisition & Expertise

Pistell, Paul J; Spangler, Edward L; Kelly-Bell, Bennett; Miller, Marshall G; de Cabo, Rafael; Ingram, Donald KK. (2012). Age-associated learning and memory deficits in two mouse versions of the Stone T-maze. [References]. *Neurobiology of Aging*. Vol.33(10), Oct 2012, pp. 2431-2439.

Wilkinson, Andrea J; Yang, Lixia. (2012). Plasticity of inhibition in older adults: Retest practice and transfer effects. [References]. *Psychology and Aging*. Vol.27(3), Sep 2012, pp. 606-615.

Morrow, D. G., Leirer, V. O., & Altieri, P. 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, C. T., Jenkins, L., Hamaluk, E., & Skaloud, P. (2000). Aging and the development of automaticity in conjunction search. *Journals of Gerontology Series B-Psychological Sciences & Social Sciences*, 55B(1), P27-P46.

Supplemental

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, N. & Bosman, E. A. (1990). Expertise and aging: Life in the lab (pp. 343-385). In T.M. Hess (Ed.), *Aging and cognition: Knowledge organization and utilization. Advances in psychology*. Amsterdam: North Holland.

Memory

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

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, J. 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, D. L., Koutstaal, W., Johnson, M. K., Gross, M. S. et al. (1997). False recollection induced by photographs: A comparison of older and younger adults. *Psychology & Aging*, 12(2), 203-215.

Supplemental

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.

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.

Carroll, John B; Horn, John L. (1981).On the scientific basis of ability testing. [References]. *American Psychologist*. Vol.36(10), Oct 1981, pp. 1012-1020.

Diehl, Manfred; Willis, Sherry L; Schaie, K. Warner. (1995). Everyday problem solving in older adults: Observational assessment and cognitive correlates. [References]. *Psychology and Aging*. Vol.10(3), Sep 1995, pp. 478-491.

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

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

Horn, John L; Donaldson, Gary. (1976). On the myth of intellectual decline in adulthood. [References]. *American Psychologist*. Vol.31(10), Oct 1976, pp. 701-719.

Supplemental

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, J. L. & Masunaga, H. (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