



Department of Psychology

Psychology 455 - Fall 2008 Sensory, Perceptual, & Cognitive Aspects of Aging

(Red Deer College)

COURSE OUTLINE

Class Time: Mondays 1:00 to 3:50 p.m.

Classroom: 1600

Course Instructor: Dr. Donald Kline

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Office: 2506H

Phone: RDC (403) 357-3675

Office Hours: Mondays 11:45 to 12:45 A.M.

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I. Required Reading

Reading: Readings are scheduled in the **LECTURE/EXAM SCHEDULE**” (Section XI) of this course outline. The assigned Readings are listed in Section XII.

The readings can be purchased at the first class and thereafter from the University of Calgary B.A. Collaborative Degrees Office thereafter (see Jennifer Ramsden).

II. Course Prerequisites

Psychology 205 & Psychology 353

III. Course Overview

Developmental changes over the life-span can be considered as occurring in two stages. The first stage, *maturation*, extends from conception to "adulthood" and is represented primarily by growth in structure and function. The actual age at which "adult" status is reached varies across individuals and also depends on the structural or functional change being considered. The second stage, *senescence*, which consists of the final three-quarters or more of the life span that extends from adulthood to death, manifests the numerous changes that we think of as "aging". Inter-individual and intra-individual variability is generally much greater for senescent changes than those that occur during maturation. The formal scientific discipline devoted to the study of senescent change is known as *gerontology*. Given that living involves either maturation or senescence, *gerontology* can be thought of as the scientific study of changes that occur with living during adulthood. In this course, we will focus on age-related change in "basic processes". After examining the foundational biological and physiological bases underlying aging, and an introductory overview of research methods in gerontology, we will discuss experimental research

findings regarding the sensory, perceptual, psychomotor, cognitive, intellectual and human factors aspects of aging.

IV. Course Learning Goals

1. Increase student understanding of the methodological issues associated with developmental research in the behavioural sciences.
2. Advance student knowledge regarding experimentally-derived findings on the relationships between aging and sensory, perceptual and cognitive performance.
3. Increase student understanding of the role of age-related sensory and cognitive changes in the everyday lives of older persons.
4. Enhance student critical thinking skills in employing the findings of the experimental psychology of aging to improve the lives of older persons.

V. Guiding Principles for Course

A. What Can the Student Expect from the Course and Instructor?

I will do my utmost to make the course a rewarding experience for you. This includes working to meet your expectations in selecting this course from among the many others available to you, and conducting this course in accord with the following principles:

1. "The universe is full of magical things patiently waiting for our wits to grow sharper." (Eden Philpotts). There are more magical things about vision than time available in the term to consider them. I will do my best to bring them to you accurate, well-organized lecture experiences, presented in an engaging and timely manner.
2. "Intellect without goodwill is apt to go astray, goodwill without intellect is apt to be impotent". (Aldous Huxley) Recognizing that neither intellect nor goodwill are alone sufficient to assure success in most human endeavours, we will pursue the ideals of both.
3. "Chance favours the prepared mind". (Louis Pasteur). "If you do not expect the unexpected, you will not find it." (Heraclitus) To optimize your "preparation" for understanding the processes of aging, we will emphasize deeper understanding of fewer topics rather than a passing familiarity with more.
4. "Experience is the child of Thought, and Thought is the child of Action". (Benjamin Disraeli, *Vivian Grey*). Because you are more likely to understand and recall material that helps you to understand and explain phenomena in daily life, practical and experiential issues will be emphasized.
5. "Human felicity is produced not so much by great pieces of good fortune that seldom happen, as by little advantages that occur every day." (Benjamin Franklin - *Autobiography*). The acquisition of knowledge and in turn, the power that goes with it is the inevitable result of such a steadily applied commitment. Each day, each class, should yield a new contribution to your "cerebral capital investment", and ultimately to your "felicity".
6. "Ah, but a man's reach should exceed his grasp, or what's a heaven for?" (Robert Browning - *Andrea del Sarto*). Demanding learning goals are set for this course with the recognition that high achievement is served by high ideals.
7. "That's not fair Franklin" (Said by his friends to Franklin the turtle in *Franklin is Bossy*, by Paulette Bourgeois). I will do my best to make exams and assignments fair and meaningful experiences, to fix any grading mistakes, to be accessible to address your concerns, to fix any problems that come to my attention. Not being psychic, however, I will depend on your help to identify any problems or needed "fixes".

B. *What is Expected of Students?*

Successful learning in any course is a dialectical process, dependent on the effort, energy and organization of both instructor and student. Things that you can do to enhance your success in the course include:

1. Read this course outline carefully. It will help everyone in the class if our time is not spent on questions already answered by these documents.
2. Keep your own life and career in mind. Appointments with yourself to learn are among the most important that you will ever make or keep. Recognize that you are the foremost beneficiary of the knowledge and skills that you acquire.
3. Be prepared. Your completion of assigned reading and Tutorials as scheduled, and active participation in class and lab discussions will also enhance your experience, skill, and enjoyment, and almost certainly, your grade for the course.
4. Respect yourself; respect others. Consistent with this, it is expected that you will attend class regularly, arrive to class on time, and conduct yourself honourably on all exams and assignments.
5. Recognize that gerontology is a vast and active research area. There is not sufficient class time to discuss all topics that appear in the readings, nor are all in-class topics covered in the readings. The two sources of information are complementary but not usually redundant, so a topic that is presented only in the text or only in class is not of lesser importance than any other (i.e., it as likely to be on the exam as any other topic).
6. Ask questions in class whenever you see the need, participate in class discussion, and respond as best you can to in-class questions.
7. Being neither clairvoyant or telepathic, I can respond best to your concerns and problems if you bring them to my attention right away.

VI. Examinations

A. Exam Components

The final course grade will be based on your 2 best scores from the 3 Term Exams associated with Modules I, II and III, plus your score on the “cumulative” Final exam component (25%). (**Note:** Due to Registrar Office restrictions on the proportion of a course grade for exams or projects in the last 2 weeks of a Term, (10%), Module III Exam and Final Cumulative Exam components will occur together during the scheduled Final Exam period.)

B. Exam Format

All exams are composed of short-answer questions. The correct response to a short-answer question might consist of a couple of lines or sentences, a listing of a number of points or issues, and/or an appropriately labeled diagram or graph. A complete and correct answer to any question is worth 2 points, graded to the nearest .5 point (i.e., 0, 0.5, 1.0, 1.5 or 2.0 points). On all exams, the first two-thirds of the questions on the exam will be directly from the assigned reading material; the final one-third will be based directly on material presented in-class (i.e., on lectures and demonstrations). Of course, some questions can be answered from either source of information. Thus, it is essential to attend class regularly, and if a class is missed, to get access to the notes for that class. The date of each class reading assignment, lecture topic and exam is presented in the **Lecture/Exam Schedule (Section XI)** below. To familiarize you with the exam format and grading scheme, a sample set of short answer exam questions will be available on the course Blackboard site prior to the first mid-term.

C. Term Exams (Best 2 of 3; 37.5% x 2 = 75%)

On each Term Exam, you will be required to answer 17 short-answer questions from a set of 21 (14 taken from assigned reading, 7 from lecture). So that the opportunity to earn a good course grade is not jeopardized by a single poor exam score, the lowest of your 3 Term Exam scores will be dropped (i.e., only the 2 best Term Exam scores are counted toward the final score total). Thus, you can have one "bad" Term Exam, or even miss an exam without penalty (although you'll probably do better in the course if you do neither). This system also eliminates the need to take a make-up for a single missed exam, make-ups are often unfair, either to the student, or to the rest of the class because they almost inevitably differ in difficulty from the regular Term Exam. However, since one Term Exam can be missed without excuse, if you miss 2 or more exams, a note from your attending physician or Dean's office must be submitted to the course instructor indicating a legitimate basis for all missed exam(s)! The student is required to pay any cost associated with a Physician or Counselor Statement regarding an absence. Since a later illness could cause you to miss one or more subsequent exams, if you miss any Term exams due to an illness, you should secure a physician's note immediately indicating the reason for the missed exam.

D. Final Cumulative Exam Component (25%)

The final exam will be administered during the Finals period in conjunction with the exam for Module III. It will consist of answering 12 short-answer questions from a set of 15 taken from Module I, II and III (5 question per module). As on the Term Exams, the first two-thirds (i.e., 10) of the questions will be based directly on the assigned reading material; the final one-third (i.e., 5) will be based directly on material presented in-class (i.e., on lectures and demonstrations). For this reason, it is critical to complete all assigned readings and to attend all classes during all 3 Modules!

E. Absence from an Exam

Make-up exams are NOT an option without an official University medical excuse (see the University Calendar). You must contact Dr. Kline 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.

VII. Grade Assignment

A. Overall Course Grade

Your grade will be calculated based on the total of 1.) the 2 best scores of the 3 Term exams (37.5%) and 2.) your score on the Final Exam cumulative component (25%).

B. Grade Scale

Grades will be based on a scale that is not more restrictive than the one below. Final grades will be assigned using the sum of the cutoffs used for the individual exams. In determining final course letter grades in relation to the final grade % cutoffs, final percentage scores will be rounded up to the nearest whole percentage (e.g., 79.5% would be rounded up to 80%).

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%

C. 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 (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 fifteen (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 fifteen (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.

D. 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.

VIII. Additional Information and Learning Tools

A. Blackboard

Announcements, Lecture Notes (PDF format), the Course Outline, and other information such as Exam Scores and Grades will be available on the Web via the U of C Blackboard site.

Your learning will be more effective if you print the lecture notes in advance and bring them to class. It'll also allow you to add any comments you need to make them clear and more useful for you. Because copyright issues preclude "Web publishing" of many of the scores of graphics and figures used in the course, the Web notes contain only the text part of the lectures. Since many of these graphics are essential to understanding the issues discussed in class, it is important that you attend all scheduled classes.

<http://blackboard.ucalgary.ca/>

To access Blackboard, you must have an IT computing account and an e-mail address. If you don't already have a University account, you can get one as follows:

Go to www.ucalgary.ca

- Click on **IT** link on top menu
- Choose appropriate link under the “**Services For**” link
- Under Tools, click on **E-mail**
- Click on **E-mail accounts**
- Click on **Accounts** link to proceed to accounts page
- Click on **How to Get an IT Computing Account**

This course outline may also be viewed and/or downloaded on the psychology Web site:

<http://psych.ucalgary.ca/courses>

B. Tutorials on the Web. The staff and students Vision & Aging Lab (VAL) have developed a series of tutorials on various topics in vision. Those relevant to topics covered in this course are listed below. The tutorials are optional, and can be accessed via the VAL home page at the following URL.

www.psych.ucalgary.ca/PACE/VA-Lab/

Tutorial	Author(s)	Associated Reading/ Lecture Topic(s)	Relevant in Module(s)
Refraction of Light	Lynk, Kline & Cooney	<i>Aging of the Visual System</i>	1
Ophthalmic (Corrective) Lenses	Bergerman, Kline, Lynk & De Maria	<i>Aging of the Visual System</i>	1; 3
Visual Size: Calculating a Visual Angle	Kline, Lynk & Cooney	<i>Age, Visual Function & Visual Loss</i>	1
Acuity: Tutorial & Testing	Shorten, Kline, Connolly & Fee	<i>Age, Visual Function & Visual Loss;</i> <i>Age & Human Factors</i>	1; 3
Art, Vision & the Disordered Eye	Coldham, Cooney & Kline	<i>Age, Visual Function & Visual Loss;</i> <i>Age & Human Factors</i>	1; 3

C. Information on the Vision and Aging Lab (VAL) on the Web. Information on Vision and Aging Lab research activities and facilities, graduate training, personnel, and research publications is also available at the VAL Web site:

www.psych.ucalgary.ca/PACE/VA-Lab/

D. Study Help on the Net. Information on how to prepare for exams ("Test-Taking Advice: Especially for the Multiple-Choice Challenged") has been made available on the Web by Drs. Tim Rogers and Don Kline at the following address:

<http://psych.ucalgary.ca/undergraduate/student-support#tta>

Although preparation for multiple-choice exams is emphasized in this study aid, the information is relevant for all exam types including the short-answer format.

IX. Eye Glass Collection for Vision Patients in the Third World

The Vision & Aging Lab serves as a collection center for the Canadian Lions Eyeglass Recycling Program. This program collects pre-owned eyeglasses for distribution to those needing them in Third World communities. If you, your family or friends have any eyeglasses that are no longer needed, you can drop them off at the Lab or give them to the Course Instructor or Lab TA, and we'll get them to the Lions. Your donation of no-longer-needed eyeglasses may help someone to see well again.

X. Important Notices

A. Important Dates

The last day to **drop** this course and still receive a fee refund is **September 19, 2008**.
The last day to **withdraw** from a Fall session course is **December 5, 2008**.

B. Student Organizations

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

Student Union VP Academic: Phone: 220-3911 suypaca@ucalgary.ca
Student Union Faculty Rep.: Phone: 220-3913 socialscirep@su.ucalgary.ca

C. Academic Accommodation

It is a student's responsibility to request academic accommodation. If you are a student with a disability who may require academic accommodation and **have not** registered with Disability Services, please contact the RDC Counseling and Learning Support Services Office (Ph. 343-4064 or 343-4067). If you are seeking academic accommodation, please notify your instructor no later than fourteen (14) days after the commencement of the course.

XI. 455 LECTURE/EXAM SCHEDULE – Fall 2008

Module 1 - Research Methods, Biology, Health & Vision (Sept. 8 – Sept. 29)

<u>Date:</u>	<u>Topic:</u>	<u>Have Read:</u>
Sept. 8 (M)	Introduction to Course Issues in Aging Research Research Design In Gerontology	---- Baltes et al.: 58-74 Schaie & Willis: 111-132
Sept. 15 (M)	Biology & Health in Aging Aging of the Nervous System	Erber: 77-121 Vinters: 135-160
Sept. 22 (M)	Aging of the Visual System Age, Visual Function & Visual Loss	Schieber: 129-134 Schieber: 134-145 Kline: 85-99
Sept. 29 (M)	Exam 1 - Module 1 Readings & Lecture Material	

Module 2: Sensory & Psychomotor Aging (Sept. 29 - Nov. 3)

<u>Date:</u>	<u>Topic:</u>	<u>Have Read:</u>
Sept. 29	Auditory Aging & Everyday Tasks	Fozard & Gordon-Salant: 251-266 Slawinski et al.: 552-561
Oct. 6 (M)	Return/Review Exam 1 Speech Perception	----
<i>Oct. 13 (M)</i>	<i>No Class - Thanksgiving</i>	----
Oct. 20 (M)	Aging of the Chemical Senses Aging of the Cutaneous Senses	Schieber: 278-288 Schieber: 288-295
Oct. 27 (M)	Attention Aging Effects on Speed & Motor Skill	Cavanaugh & Blanchard-Fields: 176-189 Belsky: 116-128
Nov. 3 (M)	Exam 2 - Module 2 Readings & Lecture Material	

Module 3: Cognitive Change & Intervention (Nov. 3 – Dec. 1)

<u>Date:</u>	<u>Topic:</u>	<u>Have Read:</u>
Nov. 3 (M)	Aging Effects on Conditioning & Learning	Kausler: 1-25
<i>Nov. 10</i>	<i>No Class – Remembrance Day Break</i>	----
Nov. 17 (M)	Return/Review Exam II Skill, Procedural & Verbal Learning Memory	---- ---- Howard & Howard: 7-26
Nov. 24 (M)	Memory Intervention & Dementia Problem Solving & Intellectual Change	Belsky: 205-223 Whitbourne: 181-211
Dec. 1 (M)	Aging, Art; Creativity & Wisdom Age & Human Factors: Home, Work & Driving <i>Course Evaluations</i>	Schulz & Ewen: 183-194 Panek: 363-394
TBA *	Term Exam 3 - Module 3 Reading and Lecture Material and Final Exam: Cumulative for Module Modules 1-3 cumulative [* Scheduled by Registrar during the Dec. 8 to 15 Fall Final Exam period.]	

XII. Psyc 455 (F08) - ASSIGNED READINGS (in order of assignment)

Module 1: Research Methods, Biology, Health & Vision

1. Baltes, P.B., Reese, H.W., & Nesselroade, J.R. (1977). Measurement. *Life-span Developmental Psychology: Introduction to Research Methods* (Chap. 7, pp. 58-74). Monterey, CA: Brooks Cole.
2. Schaie, K.W. & Willis, S.L. (1996). Research methodology in adult development and aging. *Adult Development and Aging* (Chap. 5, pp. 111 –132). New York: Harper Collins.
3. Erber, J.T. (2005). Biological aging and health. *Aging & Older Adulthood* (Chap. 3, 77-121). Belmont, CA: Thomson Wadsworth.
4. Vinters, H.V. (2001). Aging and the human nervous system. In J.E. Birren and K.W. Schaie (Eds.) *Handbook of the Psychology of Aging* (5th Ed., pp. 135-160). San Diego: Academic Press.
5. Schiber, F. (2006). Vision. In J.E. Birren and K.W. Schaie (Eds.) *Handbook of the Psychology of Aging* (6th Ed., pp. 129-145). San Diego: Academic Press.
6. Kline, D.W. (2003). Aging effects on vision: Impairment, variability and compensatory change. In N. Charness and K.W. Schaie (Eds.) *Impact of Technology on Successful Aging* (pp. 85-99). New York: Springer.

Module 2: Sensory & Psychomotor Aging

1. Fozard, J.L., & Gordon-Salant, S. (2002). Changes in vision and hearing with aging (material on hearing and speech). In J.E. Birren and K.W. Schaie (Eds.) *Handbook of the Psychology of Aging* (5th Ed., pp. 251-266). San Diego: Academic Press.
2. Slawinski, E.B. Hartel, D.M., & Kline, D.W. (1993). Self-reported hearing problems in daily life throughout adulthood. *Psychology and Aging*, 8(4), 552-561.
3. Schieber, F. (1991). Aging and the senses (material on taste, smell, touch & pain). In J.E. Birren, R.B. Sloane & G. Cohen (Eds.) *Handbook of Mental Health and Aging* (Chap. 10, pp. 278-306). New York: Academic Press.
4. Cavanaugh, J.C., & Blanchard-Fields, F. (2002). Attention. *Adult Development and Aging* (4th Ed., In Chap. 6, pp. 176-189). Belmont, CA: Wadsworth/Thomson.
5. Belsky, J. (1999). Motor performance; Enhancing sensory-motor performance. *The Psychology of Aging* (pp. 116-128). Pacific Grove, CA: Brooks/Cole.

Module 3: Cognitive, Intellectual & Human Factors Aspects of Aging

1. Kausler, D.H. (1994). Conditioning & instrumental learning. *Learning and Memory in Normal Aging*. San Diego: Academic Press. Chap. 1, Pp.: 1-25.
2. Howard, J.H., & Howard, D.V. (1997). Learning and memory. In A.D. Fisk and W.A. Rogers (Eds.) *The Handbook of Human Factors and the Older Adult* (Chap. 2, pp. 7-26). San Diego: Academic Press.
3. Belsky, J. (1999). Memory interventions. *The Psychology of Aging* (Chap. 7, pp. 205-223). Pacific Grove, CA: Brooks/Cole.
4. Whitbourne, S.K. (2001). Language, problem-solving and intelligence. *Adult Development and Aging: Biopsychosocial Perspectives* (Chap. 7, pp. 181-211). New York: John Wiley.
5. Schulz, R., & Ewen, R.B. (1993). Creativity and wisdom. *Adult Development & Aging* (pp. 183-194). New York: Macmillan.
6. Panek, P. (1997). The older worker. In A.D. Fisk and W.A. Rogers (Eds.) *The Handbook of Human Factors and the Older Adult* (Chap.15, pp. 363-394) San Diego: Academic Press.