



**Department of Psychology**  
**Sensation and Perception**  
**Psychology 369 (L02) – Winter 2007**

**COURSE OUTLINE**

<b>Class Time:</b>	Tues & Thurs 11:00-12:15 P.M.	<b>Classroom:</b>	MFH 164
<b>Instructor:</b>	<b>Dr. Donald Kline</b>	<b>e-mail:</b>	donkline@ucalgary.ca
<b>Office:</b>	Admin. 237		
<b>Office Hours:</b>	Tues/Thurs: 2:30 – 3:30 P.M. & by appointment	<b>Phone:</b>	220-4969
<b>Grad TA:</b>	<b>Mr. Joshua Bourdage</b>	<b>e-mail:</b>	jbordage@ucalgary.ca
<b>Office:</b>	Admin 141A		
<b>Office Hours:</b>	Mon & Wed: 12:00 - 1:00 P.M.	<b>Phone:</b>	220-2867
<b>Course Blackboard Site</b>	<b><a href="http://blackboard.ucalgary.ca/">http://blackboard.ucalgary.ca/</a></b>		

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## **I. Required Text**

This course does *NOT* require a text. For the first time, 369 is being offered in a “blended learning” format, where instead of a text, you will access Web-based “e-learning” materials created especially for the course by advanced psychology majors in the Psychology Instruction Project (PIP). (The PIP is described in the following section.)

URL for the 369 W07 e-learning material: [www.pip.ucalgary.ca/psyc-369](http://www.pip.ucalgary.ca/psyc-369)

If you are interested in consulting a text, some excellent reference sources include:

- 1.) Coren, S., Ward, L.M. & Enns, J.T. (2004). *Sensation and Perception* (6<sup>th</sup> Ed.) Hoboken, NJ: John Wiley & Sons.
- 2.) Goldstein, E.B. (2002). *Sensation and Perception* (6<sup>th</sup> Ed.). Pacific Grove, CA: Brooks/Cole. \*
- 3.) Goldstein, E.B. (2007). *Sensation and Perception* (7<sup>th</sup> Ed.). Belmont, CA: Thomson Wadsworth. \*
- 4.) Sekuler, R, & Blake, R. (2002). *Perception* (4<sup>th</sup> Ed.). New York: McGraw Hill.

\* The Goldstein text has been used frequently in prior versions of the course (including the 7<sup>th</sup> edition during the Fall 2006 session), so it is in wide circulation locally.

## **II. The Psychology Instruction Project (PIP)**

PIP is a University project designed by Donald Kline, John Ellard and Larry Wenger that trained 44 talented and energetic undergraduate students as instructional designers. Funded by the University, Faculty and Psychology Department, the goal of the PIP was to enhance the course by using materials created from a student's perspective, and to increase students' opportunities for interactive or experiential learning on the Web and in the classroom. The broader aim of the project was to evaluate PIP as a student designer prototype that could be scaled up and transferred to benefit students right across the campus.

The PIP students received training from campus experts on technical (e.g., Dreamweaver, Photoshop, Breeze, Web servers, and storyboarding) and instructional Web development skills (i.e., project management, instructional design, informational retrieval, writing for the Web, copyright law, optimizing the visual impact of learning materials, and the effective use of feedback in team environments). With the help of an undergraduate technical team (the "T Team"), the PIP students were guided in four-member support groups through the creation of two e-learning units (i.e., topics) for either Psyc 312 (Experimental Design & Quantitative Methods, and/or Psyc 369 (Sensation & Perception), courses that they had previously completed in traditional lecture/text format. In short, the Web materials that have replaced the text for this course were developed for you by students like you. As you progress through the PIP designers' units on the Web, you will "meet" many of them through their online bios and the e-learning materials that they have created. Toward the end of the course, we will seek your feedback on how effective you found this approach, and how we might improve on it for the students who will follow you.

## **III. Course Prerequisites**

Psychology 205.

## **IV. Course Overview**

Our ability to interact safely, effectively and enjoyably with the world around us depends on the ability to extract accurate and timely sensory information from the environment. Sensory systems enable us to carry out everyday tasks - to hit a ball, run without falling, converse with another person, and appreciate art or music. Sensory systems are also critical for our survival - they allow us to determine if a substance is likely to be edible, if a stimulus is likely to cause pain or injury, if a predator or prey is nearby, or to predict if we are about to cross the path of an oncoming train.

The goals of this course are to provide students with an understanding of: 1.) the basic sensory systems for sight, hearing, touch, pain, smell and taste, 2.) the scientific methods used to study sensory/perceptual systems, 3.) how our sensory/perceptual abilities change as we develop and age, 4.) some of the intriguing sensory/perceptual phenomena that we encounter in everyday life, and 5.) the background needed for advanced study of sensory and perceptual processes (e.g., Vision: Psyc 469, and Audition: Psyc 471). This outline is a "learning contract" for meeting these course goals.

The course is composed of four Modules, each corresponding to about a quarter of the term. At the conclusion of each Module, an exam will test your understanding of the assigned text and lecture/demo information. The specific topics considered in each Module are presented in the section XI (Lecture/Exam Schedule) of this outline.

## **V. Expectations for Mutual Success**

Your learning achievements in this course are the best measure of its success. Our efforts to facilitate your learning depend on our shared ability to meet clear and reasonable expectations of one another.

I have listed below some of the expectations that we will guide us toward mutual success - first those to be met by the instructors, then those for students.

## **A. Student Expectations of the Course Instructors**

*As the Instructors of Psyc 369, I will do my best to:*

1. Make the course a highly enjoyable and rewarding overall learning experience for you.
2. Share with you some of the many fascinating problems in perceptual research, some of them among the most interesting in science.
3. Ensure that course is offered in manner consistent with this course outline.
4. Ensure that the course proceeds in a clear and organized manner.
5. Make exams fair, and representative of the assigned lecture and reading material.
6. Provide you with the feedback that you need to understand your grade on any exam as well as the course overall, and to fix any marking errors that arise.
7. Be accessible, and to respond to your concerns.
8. Recognize and fix any course problems that you bring to our attention.

## **B. Instructors' Expectations of Students**

*Expectations of students in this course include that they will:*

1. **Read this course outline.** Most questions about the course are answered by the information in this Outline. Please remember that there are more than a hundred students in this course, but only one instructor. So that you do not waste time, including that of other students, please check to be sure that your questions are not already answered by the Outline.
2. **Recognize that learning increases your intellectual capital and power.** As for most experiences in life, your benefits from this course will be a function of the effort that you invest in it. Considerable hard work will be needed for you to do well in this course, so if you are looking for an "easy course" then you should enroll elsewhere.
3. **Work smart.** Active involvement in a course and your on-time completion of the unit learning assignments will produce deeper, lasting more efficient learning. That's why we have included a specific Web unit for every lecture topic; I will expect you to come to class having completed the assigned unit(s)!
4. **"What goes around comes around!"** Although it may not be a self-evident truth, professors are people too and we appreciate receiving the same fair-minded, considerate treatment as other humans. Among other things, this means that I expect you to: a) arrive at class on time, b) inform the instructor at the beginning of class if there is a need to leave during the class, c) not talk during class (except for in-class discussion), and d) respond to the instructor's in-class questions whenever possible.
5. **In a University course there is not sufficient time to lecture on all important topics.** Because the number of classes in a Term is too limited to cover a vast breadth of topics, many of the specific topics covered in the assigned Web units cannot be included in the lecture. But because a topic cannot be covered in class, it is not less important! Or to be very practical about it, an assigned reading topic is just as likely to be on the exam, whether it was included in lecture or not!
6. **Exams in this course use a "paperless" format.** Any exception to this must be secured in writing from the Instructors (for specific details, see the Examinations and Grading Section below).
7. **Academic misconduct (e.g., cheating on exams, plagiarism) is unfair to other students; it demeans the perpetrator, and is completely unacceptable to your**

**instructors.** Thus, we will do our utmost to assure that any instances of such misconduct receive the maximum penalty allowable under University policy.

- 8. If there are any questions, issues or problems, please come and see us.** Please remember that although we're both pretty "user-friendly" and want to be as helpful to you as we can, we can do so only if you tell us about your concerns during the office hours, before or after class, or during an appointment.

## **VI. Examinations**

### **A. Exam Scheduling**

There will be four exams (Three Term Exams plus a Final Exam), each one at the end of each of the four course Modules (i.e., Modules I to IV). The Final Exam is "partly comprehensive" in that it will include questions from Modules I, II, and III, plus the material assigned in Module IV. **Please Note:** A detailed schedule of class topics, assigned Web unit(s) for each class, and Term exams is provided in the Lecture/Exam Schedule (Section IX) of this course outline. The Final Exam is scheduled by the Registrar's Office during the Final Exams period.

### **B. Exam Format**

**1.) Term Exams (57% of grade)** - The three term exams will each consist of 48 multiple-choice questions given in "paperless" format (see following section on "Exam Type" for a description of "paperless" exams). The first two-thirds on each exam (i.e., approximately 32 items) will be answerable directly from the assigned Web unit material. The final one-third of the items (i.e., about 16) will be based on the lecture/demonstration material presented in class. Thus, it is essential to attend all classes, and to review the notes provided on Blackboard for any classes that are missed. **Only the best two of the three Term Exam scores count** toward your final grade for the course; each of them accounts for 28.5% of your grade for the course.

**2.) Final Exam (43% of grade)** - The 72-item Final Exam is "partially cumulative" consisting of 54 multiple-choice questions from the course Module IV, plus 18 multiple choice questions from Modules I, II and III (6 questions per Module). As for the Term exams, the Final Exam will also be "paperless". And again, 2/3 of the items for each course module will be based on the assigned text material, and 1/3 of items will be from the Lecture material. The final exam is worth 43% of your course grade.

### **C. Exam Type**

**1.) "Paperless" Exams.** To provide students with more time to complete each exam, as well as save paper, trees, money and support staff resources, exams will be given using a "paperless" approach. The multiple-choice items are presented on-screen at the front of the classroom using either 2 or 3 overhead projectors, 8 or 12 items at a time (i.e., 4 questions per page). So that everyone has enough time for more difficult questions, the exam is presented two times, with a short "Exit Break" between the sessions. The exit break allows those who are satisfied with their answers to leave after the first session. Exams are reviewed in the class following the one in which the exam was taken. An Answer Recording Form is provided so that you can note any items that you want to revisit in the second session, and also for recording all your answers for the purpose of reviewing your answers during the exam review. (The latter is important because Freedom of Information and Privacy Act makes it impractical to return the original answer sheets in large classes such as this one.) So that

you are completely familiar with the paperless approach to exams, the exam procedures will be explained in class, and a practice exam will be provided prior to the first term exam.

A systematic study of the paperless exam procedure (Ellard, Kline, & Wenger, 1994) shows that student performance is actually a bit better on paperless than paper exams. The paperless approach provides other important benefits as well. These include more time for everyone to write the exam, equity in time to write the exam, and a quieter exam environment. And by avoiding the consumption of literally thousands of sheets of paper, there is a considerable ecological and economic saving. **Note:** Because the paperless format necessitates that all students begin the exam at the same time, it is necessary to ***be in class*** and in your seat ***not later than the scheduled class time!***

**Reference:** Ellard, J., Kline, D., & Wenger, L. (1994, July). Paperless exams: Saving trees and money without compromising student performance. Poster presented at the annual meeting of the Canadian Psychological Association, Penticton, B.C.

**2.) Written Paperless Exemption Waiver (for Paper Exams).** For students whose performance would be demonstrably disadvantaged by the paperless exam format (e.g. those with low vision with their best visual correction or other disability), a written waiver for taking a paper rather than “paperless” version of exams will be provided on a pre-approved basis **ONLY**. To secure such a waiver, written documentation from the University’s Disability Resource Centre, or a statement from an eye-care professional (i.e., an optometrist or ophthalmologist) that indicates the student's "best-corrected far acuity" monocular or binocular must be presented to the Instructor responsible for the exam at least one week prior to the date of the exam.

#### **D. Posting & Recording of Exam Scores**

Assuming that exam scores are available from the University computerized grading facility, Term Exam scores will be posted by 2:00 PM on the first regular class day following the exam on the course Blackboard site. Scores will be listed in order of increasing student I.D. number, along with a score/grade distribution to indicate the letter-grade equivalents for that exam. **Note:** Only your score, not its letter grade equivalent, is entered into the computer for each exam; that way, any score points over the minimum letter grade equivalent for each exam can be "carried forward" to help your final letter grade for the course.

### **VII. Grade Assignment**

#### **A. Exam Score/Grade Distribution**

Grades for each Term Exam and the Final Exam, as well as for the course overall, will be assigned using a score/grade distribution that follows:

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%

Credits for research participation will be added to the final grade percentage. As noted in the University Calendar, it is 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 as appropriate (i.e., 89.5% will be rounded up to 90%; 89.4% will be rounded down to 89%, etc.).

## **B. Final Course Grades**

Your final course grade will be assigned based on: 1.) your best two scores on the three Term Exams, 2.) your score on the Final exam, and 3.) any Bonus credits earned for Research Participation. Dropping the lowest Term Exam score allows the student to have a "bad Term Exam" or even to miss a Term exam due to illness and still do well in the course. This approach also avoids the need to take a "make-up" for a single missed Term Exam, an important consideration in a high-enrollment course where make-ups are likely to be unfair to the person taking it, or to the rest of the class. It is critical, however, NOT to miss an exam unless absolutely necessary since a subsequent illness could cause you to miss a second exam. If two or more exams are missed, a separate physician's or counselor's note must be submitted indicating the health basis for each missed exam.

## **C. Course Credits for Research Participation**

Students in most psychology courses are eligible to participate in Departmentally approved research and earn credits toward their final grades. To get 2% added to the final grade, you have to acquire a total of 2 research credits towards the course. Students can create an account and access the Research Participation System website at <http://ucalgary.sona-systems.com>. The last day to participate in research in the Winter Term is April 12, 2007.

## **D. 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.

## **E. 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.

## F. 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. Extra Learning Tools

### A. Tutorials on the Web

To assist your mastery of some of the course topics, we have created several computer-based tutorials a number of Web-based tutorials. The tutorials are listed below along with the topics for which each is most relevant. They can be accessed via the Vision & Aging Lab home page at the following URL:

[www.psych.ucalgary.ca/pace/VA-Lab/](http://www.psych.ucalgary.ca/pace/VA-Lab/)

Tutorial	Author(s)	Relevant to Course Topic(s)	In Course Module
<b>Refraction of Light</b>	Lynk, Kline & Cooney	<i>Invitation to the Eye Ball Clinical Vision</i>	I III
<b>Visual Size: Calculating a Visual Angle</b>	Kline, Lynk & Cooney	<i>Acuity &amp; Contrast Sensitivity</i>	II
<b>Bases of Colour Vision</b>	Wagner & Kline	<i>Colour Perception &amp; Deficiencies</i>	II
<b>Colour Perception in Everyday Life</b>	Kokotailo & Kline	<i>Colour Perception &amp; Deficiencies</i>	II
<b>Art, Vision &amp; the Disordered Eye</b>	Coldham, Cooney & Kline	<i>Clinical Vision</i>	III
<b>Corrective (Ophthalmic Lenses)</b>	Bergerman, Kline, Lynk & De Maria	<i>Clinical Vision</i>	III
<b>Visual Development</b>	Salamanca & Kline	<i>Visual Development</i>	IV
<b>Visual Agnosias</b>	Rai & Kline	<i>Clinical Vision</i>	IV

### B. Class Notes on the Web

The text notes for each lecture/demo are available on the course Backboard site. You'll find that it saves you a lot of time and effort to print them off in advance and bring them to class. That way, you

can add whatever 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 component of the lectures. Since many of these graphics are essential to understanding the issues discussed in class, it is critical that you attend all scheduled classes.

### **C. 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:

[www.psych.ucalgary.ca/students/ugrad/test-taking\\_advice.html](http://www.psych.ucalgary.ca/students/ugrad/test-taking_advice.html)

Although preparation for multiple-choice exams is emphasized in this learning aid, the information is relevant for all exam types, short-answer and essay included.

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

Our Vision & Aging Lab (VAL) operates an Lions Recycle for Sight eyeglass collection site for the collection and distribution of used eyeglasses to those needing them in Third World communities. If you, your family or friends have eyeglasses that are no longer needed, you can donate them to someone who cannot afford the glasses that they need to see. To participate, just give them to the Course Instructor or TA drop the glasses off at the Lab (Admin 237).

### **X. Important Notices**

#### **A. Important Dates**

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

#### **B. 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)



## XI. Lecture/Exam Schedule

### MODULE I The Eye & the Brain (Jan. 9 – Jan. 30)

By Date (Day)	On the Topic:	Complete Module/Unit:
Jan. 9 (T)	<i>Intro to Psyc 369: Course &amp; Exams</i> About Sensation & Perception	----- 1.1 Intro to Sensation & Perception
Jan. 11 (R)	About Sensation & Perception Measuring Perception	1.2 Measuring Sensitivity 1.3 Difference Thresholds --
Jan. 16 (T)	An Invitation to the Eye Ball Spotlight on the Retina	2.1 The Eye 2.2 Retina
Jan. 18 (R)	Spotlight on the Retina A Walk Along the Path to the Brain	2.2 Retina 2.3 Visual Pathways
Jan. 23 (T)	The Visual Brain <i>Sample Paperless Exam</i>	2.4 The Visual Brain -----
<b>Jan. 25 (R)</b> <i>Exam I: Course Module I Web Assignments &amp; Lecture/Demo Material</i>		

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### MODULE II Colour, Change & Loss (Jan. 30 – Mar. 1)

By Date (Day)	On the Topic:	Complete Module/Unit:
Jan. 30 (T)	<i>Exam I – Review</i> Lightness & Darkness	----- 3.1 Brightness,Lightness,Darkness
Feb. 1 (R)	Colour Perception & Deficiencies	3.2 Perceiving Colour 3.3 Colour Deficiencies
Feb. 6 (T)	Acuity & Contrast Sensitivity Perception of Motion	4.1: Spatial Vision 4.2: Perceiving Movement
Feb. 8 (R)	Perception of Motion The 3rd Dimension: Depth Perception	4.2: Perceiving Movement 4.3: Perception of Location
Feb. 13 (T)	Objects & Scenes: Seeing & Believing Time Perception	4.4: Perceiving Objects, Scenes, --- 4.5: Time & Temporal Resolution
Feb. 15 (R)	Time Perception	4.5: Time & Temporal Resolution
Feb. 18-25	<i>No Classes – Reading Week</i>	
<b>Feb. 27 (T)</b> <i>Exam II: Course Module II Web Assignments &amp; Lecture/Demo Material</i>		

**Module III**  
**Sensory Loss, Touch & Pain (Mar. 1 – Mar. 27)**

<b>By Date (Day)</b>	<b>On the Topic:</b>	<b>Complete Module/Unit:</b>
Mar. 1 (R)	<i>Exam II Review</i> The Constants in a Changing World	----- 5.1: Constancy in Changing ---
Mar. 6 (T)	Clinical Vision Auditory System	5.2: Clinical Aspects Vision 6.1: Sound: Auditory System
Mar. 8 (R)	Auditory System Auditory Perception	6.1: Sound: Auditory System 6.2: Perceiving Loudness ---
Mar. 13 (T)	Auditory Perception Speech Perception	6.2: Perceiving Loudness --- 6.3: Perception of Speech
Mar. 15 (R)	Clinical Audition Touch Perception	6.4: Clinical Aspects Hearing 7.1: Cutaneous Senses - Touch
Mar. 20 (T)	Touch Perception Perception of Pain	7.1: Cutaneous Senses - Touch 7.2: Cutaneous Senses - Temperature & Pain
<b>Mar. 22 (R)</b>	<b><i>Exam III: Course Module III Web Assignments &amp; Lecture/Demo Material</i></b>	

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**Module IV**  
**Touch, Smell, & Clinical Aspects (March 27 – April 12)**

<b>By Date (Day)</b>	<b>Lecture Topic:</b>	<b>Complete Module/Unit:</b>
Mar. 27 (R)	<i>Exam III Review</i> Smell	----- 8.1: Smell (Olfaction)
Mar. 29 (R)	Taste Visual Development	8.2: Taste & Flavour 9.1: Development of Vision
Apr. 3 (T)	Visual Development Auditory Development	9.1: Development of Vision 9.2: Development of Hearing
Apr. 5 (R)	Visual Aging Knowledge Effects on Perception	9.3: Aging of the Senses 10.1: Perceiver in Perception
Apr. 10 (T)	Knowledge Effects on Perception ESP	10.1: Perceiver in Perception 10.2: Extrasensory Perception
Apr. 12 (R) ( <i>Last Class</i> )	ESP <i>Course Evaluation</i>	10.2: Extrasensory Perception -----
<b>Registrar- Scheduled Final</b>	<b><i>Partly Comprehensive Final – Includes questions from Modules I, II &amp; III plus Exam 4 on Module IV Web Unit Assignments &amp; Lecture/Demo Material (Final Exam scheduled by Registrar in final exam period, April 16 to 26.)</i></b>	