



UNIVERSITY OF
CALGARY

Department of Psychology
Psychology 469 - Vision
Fall Session - 2007

LAB B01 OUTLINE & SCHEDULE

Lab Time: Tuesday 5:00 to 6:50 P.M.

Classrooms: SS18 & A253

Laboratory Instructor: Mr. Cody Tousignant

Phone: TBA

Office: TBA

E-mail: TBA

Office Hours: TBA

Course Instructor: Dr. Donald Kline

Phone: 220-4969

Office: Admin. 237G (Pl. knock – door usually locked)

Email: donkline@ucalgary.ca

Office Hours: Tues & Thurs 11:00 to 12:00 P.M. & by appointment

I. ASSIGNED LAB READING & REFERENCE MATERIALS

1. *Lab & Workshop Schedule* (Section VII in this document)
2. *General Guidelines for 469 Lab Assignments* (In Lab Pack)
3. *Lab Report Scoring Feedback Form* (In Lab Pack)
4. *Individual Lab Assignments & Manuals* (In Lab Pack)
5. Reference: *Publication Manual (5th Ed.) of the American Psychological Association*

The “Lab Pack” includes a set of sample short-answer exam questions, Lab Guidelines, Lab Scoring Feedback Form as well as manuals & guidelines for carrying out each lab. It can be purchased through PSYCHS (The Association of Undergraduate Psychology Students) in Admin 170.

II. LAB OVERVIEW

NOTE: This document supplements the main Course Outline and applies only to the lab component of Psyc 469. The main Course Outline should be read prior to the lab supplement because it provides critical additional information regarding the course, including an overview of Course Goals, the Guiding Principles for the Course, Examinations and Grading, additional Learning Tools and Lecture/Exam Schedule. Be sure to ask the course and/or lab instructor for clarification regarding any aspects of the lecture or lab components of the course that are unclear to you.

The goals of the laboratory component in Psyc 469 are to: 1.) facilitate student learning about research methods in vision by through "hands-on" research experience, 2.) provide more in-depth understanding of selected content areas in vision, 3.) advance your skills in scientific writing and the analysis of quantitative research data, and 4.) provide you with some experience in using research information to understand and solve "real-world" visual problems. Your experience will include testing individual research participants (usually a lab partner) according to guidelines provided, the analysis and graphical presentation of data, and the write-up of scientific papers in APA format.

III. PREPARATION AND EVALUATION OF LAB ASSIGNMENTS

Generally, lab reports should be prepared in APA format as though they were an original study. Since not all labs call for a complete write-up with Introduction, Method, Results and Discussion sections, be sure to review the guidelines for each lab assignment very carefully. Generally, the write-up should be no longer than 6 double-spaced printed pages (font size not smaller than 12 point or, if typed, not more than 12 cpi). You need only use the information provided in the course in completing the assignments. Your lab report should also include the results of any relevant statistical analyses (Results section), as well as appropriate supplementary materials (diagrams, tables, figures, appendices). Where necessary, the Lab Instructor will collate the data from the lab section or class to create the data sets that will be returned to the class for completion of the report. **N.B.:** Any attachments (e.g., figures or appendices) included with the report can be in addition to the 6-page guideline.

Detailed explanations of the apparatus and materials, procedures and assignment expectations will be provided for each lab in the form of handouts, and/or will appear on-screen as part of a computerized lab and/or tutorial. Read each lab assignment carefully **before** coming to class to make sure that you are familiar with the procedures and guidelines specific to the study that you will carry out. Otherwise you may find that you are unable to complete the lab assignment within the class time available. Advance reading also makes it more likely that you will avoid costly errors in conducting your study. The 469 Guidelines for Writing Up 469 Lab Assignments and the 469 Lab Report Scoring Feedback Form should be consulted before writing each assignment. The guidelines for each lab study along with the general Guidelines and Scoring criteria will provide you with important information regarding the standard that will be used by the Lab Instructor in grading each of the lab assignments.

A hard (printed) copy of each lab assignment should be delivered to your T.A. directly or indirectly via the Psychology Main Office (Rm. A275), not later than the day that they are due (*see **Lab & Workshop Schedule** below*). **Note:** *E-mail attachments will NOT be accepted.* Due to the tight time constraints imposed on the Lab Instructor to grade lab assignments, collate data sets and to prepare subsequent labs, 1.0 of the 5.0 marks available for that assignment will be deducted from the total mark of your lab assignment for each day that it is late without prior permission from the Instructor, (i.e., No credit will be given for lab assignments that are late by 5 days or more.) **Please Note:** *Lab assignments are scheduled as much as possible to avoid interference with study preparation for Term Exams. When a lab assignment due date cannot be avoided during an exam week, extra time is provided for its completion.*

IV. GRADE FOR LAB COMPONENT OF THE COURSE

As explained more fully in the main Course Outline, the lab component of Psyc 469 counts for 34% of your final course grade. This is based on completion of 4 Workshops (1.0% each for "completion credit" = 4%), participation in the 5 scheduled in-class Lab Projects (1% each for "participation credit" = 5%), plus your 5 best scores on the 6 graded Lab Project Reports (each worth 5.0% = 25%). Your grade for any given lab assignment can be appealed provided that a written explanation of the specific bases for your concern with the original mark is submitted along with the original marked assignment to the Lab Instructor (i.e., the T.A.) within two weeks of receiving your grade. **Note:** Since an appealed lab assignment will be completely remarked, your grade could remain the same, increase OR decrease.

V. PARTICIPATION ELIGIBILITY TO SUBMIT A LAB REPORT ASSIGNMENT

Most lab assignments are based on an analysis and write-up of data derived by the whole class (i.e., on a "class data set"). Therefore, to be eligible to submit a written lab assignment for grading, a student must participate in the corresponding in-class study. Reports submitted by students who did not participate in the lab to contribute to the class data set will **NOT** be accepted. Exceptions to this will be made only for students who are unable to participate in the lab due to demonstrated visual problems, disability or illness. In the latter case, a doctor's note indicating the reason and dates for the illness-based absence will be required before the lab assignment will be graded.

VI. IMPORTANT NOTICES

A. 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.

B. 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.

C. 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.

D. 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.

E. 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 suvpaca@ucalgary.ca
Student Union Faculty Rep.: Phone: 220-3913 socialscirep@su.ucalgary.ca

F. Important Dates

The last day to drop this course and **still receive a fee refund** is September 21, 2007. The last day to withdraw from this course is December 7, 2007.

VII. LAB & WORKSHOP SCHEDULE

A brief overview of each lab is provided below. A manual for conducting each lab is provided in your 469 Lab Pack. Be sure to prepare for each lab class by reading the manual carefully in advance. Lab assignments are usually due at least 9 days (depending on exams and holiday conflicts) after the lab class with which it is associated, and see the following schedule for the due date of each lab assignment.

Note: No labs are scheduled during the first week of classes!

1. Tues, Sept. 18 Workshop 1: Intro to Tri-Lab: Refraction of Light Tutorial
Location: SS18

This workshop will introduce you to the Macintosh computers in the Social Sciences Mac Lab facility (Basement of Social Sciences Building – Rm. SS18) through completion of a Web-based programmed learning package on the *Refraction of Light*. In addition to showing you how to access the computer-based materials available to help you in the course, this tutorial will also help you to understand the in-class material on refraction, some of which will be on Term Exam 1.

Assignment Due: N/A **Score Value:** 1.0% for Completion

2. Tuesday, Sept. 25 Lab 1: Mapping the Retina
Location: A253

The lab manual you lead you through the process of determining how the retina varies in its sensitivity to stimuli of different types. You will use a “perimeter” to determine how acuity, colour discrimination, shape discrimination, object detection, and motion sensitivity vary by retinal location. Your lab report should consist of an Introduction (including hypotheses), Results and Discussion sections in 5th edition APA style (i.e., Procedure and References sections are not necessary).

Lab 1 Report Due: Fri, Oct. 5 **Score Value:** 1.0% Participation; 5.0% Report

3. Tuesday, Oct. 2 Workshop 2: Introduction to 5th Ed. APA & SPSS Analysis
Location: SS18

This class will introduce you to scientific writing in the format of the 5th edition of the Publication Manual of American Psychological Association (APA). Since all lab reports must be in the APA format, your participation in this workshop is critical. You will also learn how to use the Statistical Package for the Social Sciences (SPSS) for the Mac to carry out analyses on the data collected in your lab assignments. Without an understanding of how to access and use SPSS, you will not be able to carry out the statistical analyses that are integral to most of the lab assignments.

Assignment Due: N/A **Score Value:** 1.0% for Completion

4. Tuesday, Oct. 9 Lab 2: Acuity Testing: Tutorial and Lab
Location: SS18

In the initial tutorial segment of this lab, you will learn about resolution acuity and some of the factors that affect it. After completing the tutorial, you and a partner will serve alternately as "experimenter" and "research participant" in a study designed to estimate the effect of target crowding and target contrast on acuity. The lab report you will hand in should contain a brief statement of the research problem and hypotheses, as well as a Procedure, Results and Discussion section in 5th edition APA style (i.e., a full Introduction and Reference section are not required).

Lab 2 Report Due: Fri, Oct. 19 **Score Value:** 1.0% Participation; 5.0% Report

5. Tuesday, Oct. 16
Location: SS18

Workshop 3: Color Vision and Contrast Sensitivity Testing

You and your lab partner will test your colour vision using the Insight 2.0 In Colour application (computer version of the D-15 color test) and a Web site <http://tjshome.com/selftest.php> (computer version of the Ishihara colour test). The Insight 2.0 In Colour application will also allow you to measure your contrast sensitivity function with and without optical blur.

Assignment Due: N/A

Score Value: 1.0% Completion

6. Tuesday, Oct. 23 **Lab 3: Assessing Sign Legibility**
Location: Rm. A253 & Adjacent Hallways

You and a partner will carry out a study to compare the distance at which scale-model black-and-white highway signs of three types (Standard Text, Standard Symbol, and Modified Symbol) are legible. Your assignment is to complete and submit the Introduction (with hypotheses), Results and Discussion sections (i.e., Procedure and References sections not required) of the study. Please note that the data from this lab are necessary to carry out Lab 4 (Optimizing Legibility), and that some of the content from the Lab 3 report can also be used in your Lab 4 report.

Lab 3 Report Due: Fri, Nov. 2

Score Value: 1.0% Participation; 5.0% Report

7. After completing Lab 3 (i.e., after Oct. 23) **Lab 4: Optimizing Sign Legibility**
(Independent project)

Location: Any suitable venue of your choice, preferably with lighting levels comparable to those in Lab 3 (above) to allow for an unconfounded comparison of the data.

There is NOT a formal lab class this week. Since Lab 4 is a “sequel” to Lab 3, you can begin Lab 4 as soon as you wish after completing Lab 3. In Lab 4, you will use the information that you have learned in Lab 3 about the factors that affect sign legibility to redesign the symbols tested in Lab 3 so as to improve their legibility. The overall outside dimensions and shape of the original signs must be retained (those are defined by law), but the shape and size of the symbol on the sign can be changed. After redesigning the symbols, you will test them with 2 or more naïve observers to determine if their legibility distance is significantly greater than that of the corresponding original version of each sign. After comparing the legibility of the original with your new symbols. You should discuss the reasons for any differences you find (i.e., increases or decreases in legibility), relating them to spatial vision issues (e.g., feature size and separation, crowding or contour interaction effects). Your report should be in APA 5th edition style and include an Introduction (with hypotheses), Procedure, Results, Discussion and References sections. Appropriate graphs and tables should be included as per APA format.

Rm. A253 will be available for your use during the usual class time. But you can carry out your study either during the regular lab time, or at some other time that is convenient for you and your two or more volunteer observers. Try to keep the testing conditions as similar as possible to those used in testing symbol legibility in Lab 3; the easiest way to do this is to test

your new design is in the same location. If a different test situation is used, be sure to describe it, and in particular, how any conditions that could affect legibility distance differ from those used for testing in Lab 3.

Lab 4 Report Due: Fri, Nov. 15 **Score Value:** 5.0% Report

[Note: No lab during week of Nov. 12-16 due to Reading Days: Nov. 10-13)]

8. Tuesday, Nov. 6 Lab 5: Retinal Locus and Visual Self-Guidance
Location: A253 & Adjacent Hallways

The guidance of self-motion through the environment depends differentially on information from different areas of the retina. With a partner you will compare the roles of the central and peripheral retina in affecting speed, errors and task difficulty when walking a narrow-path U-shaped course. A complete lab report (4th edition APA style) is required, including an Introduction (with hypotheses), Procedure, Results, Discussion and References sections. Appropriate figure captions, graphs, and tables should be attached as per APA format.

Lab 5 Report Due: Tues., Nov. 20 **Score Value:** 1.0% Participation; 5.0% Report

9. Tuesday, Nov. 20 Workshop 4: Refractive Problems of the Eye & their Correction
Location: SS18

Complete the **Ophthalmic Lenses** and **Refractive Problems of the Eye** tutorials. Participate in practicum demo with functioning eye model.

Assignment Due: N/A **Score Value:** 1.0% Completion

10. Tuesday, Nov. 27 Lab 6: The Vision Detective: A Clinical Mystery
Location: Rm. A253

Your task in this “capstone” lab will be to use your knowledge of vision and visual testing to solve a "clinical vision mystery". A primary goal is to learn how vision test data relate to "real world" visual problems. You will work as part of a team of three persons, each one taking a turn serving as "patient", "lab technician" and "doctor/detective". The "patient" will randomly select a unique "patient profile" from among several provided. The actual profile selected, known to "patient" and "technician" but not the "doctor/detective", will provide the patient's "history" and "symptoms as well as indicate the simulation device(s) to be used to simulate his/her visual dysfunction(s). The "doctor/detective's" task is to discover/diagnose the likely "cause" of the patient's visual problems by reviewing his/her reported symptoms, and history and then requesting that the appropriate vision tests be carried out by the "lab technician".

Your lab assignment is to write up the case history for your patient in APA format in your role as "doctor/detective". The case history should include the patient’s background and demographic information, any health history that is directly relevant to the diagnosis, the

visual tests conducted and the results from them, your diagnosis and the reasons that underlie it, possible treatments for the problem, and finally, your recommendations for the patient's management of their dysfunction(s) (e.g., prognosis, appropriate activities and task limits, risk factors, etc.).

Lab 6 Report Due: Thurs Dec. 6 **Score Value:** 1.0% Participation; 5.0% Report

Note: To facilitate completion of your Lab 6 assignment & prep for Final Exams, no lab is scheduled for Tues, Dec. 4!