Psychology 321 and 321L: Experimental Psychology
Summer Session 2008

Instructor: Dr. H.B. Lee Office: ST301
Phone: 677-2827/677-4863 Office Hours: TBA
Required Text: Webster, S. K. (2007). Hand in Hand: Research Design & Statistics in the Behavioral Sciences. Mason, OH: Thomson

Additional material will be handed out in class or posted on the web. For material posted on the web, it is the student's responsibility to download a copy for themselves. If a student is absent, unavailable, or not present in class when materials are distributed, that student is responsible for obtaining additional material.

Pre-requisites for this course are including but not limited to successful completion of Psychology 320 and 320L or its equivalent. This means:

1. Students who have not successfully completed 320 and 320L with a grade of "D" or better will not be allowed to take this course. No exceptions!
2. Students who are concurrently enrolled in Psychology 320 and 320L or its equivalent during this semester will NOT be allowed to take this course. No exceptions.
3. Each student in the course must provide written evidence to the instructor on or before Monday, June 1st, 2008 by 12 PM that Psychology 320 and 320L or its equivalent was completed successfully. Students unable to show evidence will not be allowed to take this course.
4. Each student must have a statistics textbook (usually from their Psychology 320 or Math 140 class).

The instructor is **not obligated** in any way to add students to the class even if there are vacancies. Some not-enrolled students think the instructor will eventually add them to the class if they continue to attend class. The instructor is NOT obligated and will NOT add such students. Students who are successful in adding the course must present to the instructor official written evidence of satisfactory completion of the pre-requisites at the time permission numbers are given. No permission numbers will be given to a student who does not have this information available at that time. Additionally, that student forfeits any claim to permission numbers and will not be re-considered. If a waiting list for adds are created by the instructor, students on that list must answer to every roll call. The failure to respond to roll call will result in a forfeiture of status on the waiting list. That student will no longer be considered. Any student who is administratively dropped by the university for any reason, (e.g. non-payment) will be placed on the waiting list. Such students will not be given any special considerations by the instructor for admission into the class.

The Signed Course Agreement

Each enrolled student MUST provide a signed copy of the course agreement form in order to remain in the class. Any student who has not signed and returned the agreement to the instructor will not be allowed to remain in the course. Students who are NOT enrolled in the class are NOT guaranteed admission into the class just because they have signed an agreement. If the instructor decides to grant admission to a student not enrolled in the class, the student must provide a signed agreement at the time permission to enroll numbers are given.

This course assumes that each student is knowledgeable of statistics. Other than the assignment in the lab portion in this course and the statistics exam, no other remedial or review will be conducted. Additional and more complex statistical methods will be presented in the class that was not covered in Psychology 320 and 320L. These methods and procedures will be heavily based on mastery of material presented in Psychology 320 and 320L as taught by this instructor (Lee). The foundation material is given on the website: **http://www.csun.edu/~vcpsy015/home.htm**
If the material on that website is unfamiliar, unknown or confusing to you do NOT take this course from this instructor. If your 320/320L instructor did NOT cover the material presented on this web page or had inadequate coverage, do NOT take this course from this instructor. If you have activities such as weddings, trips, etc planned during this session, do not take this course from this instructor. If you feel you will not be able to show up to every class meeting on time and stay the entire period (both lecture and lab portions) do NOT take this course. Penalties are severe for missing any portion of the class meeting. If you feel that your background in statistics and quantitative thinking suffers because you took statistics "years ago" or because you had statistics at "another school" or you had a "bad teacher" when you took statistics, do not take this course from this instructor. If you have never had SPSS or never did hand computations and not willing to learn that material ON YOUR OWN, do not take this course from this instructor. No leniency, exceptions, excused absences or special considerations will be given. The instructor of this course is NOT responsible for each student's previous background and instruction in statistics and logical thinking. Incomplete grades will only be given if the student meets the proper circumstances that justify an incomplete. Each student is expected to

have a basic operational knowledge on how to use SPSS as laid out in the manual available at the website **http://www.csun.edu/~vcpsy015/spssman.pdf.**

Objectives of the Course:

1. Understand the historical development of experimental psychology
2. Recognize the contributions of some historical figures in experimental psychology.
3. Use of online tools for research such as PsycInfo
4. The ability to identify the types of research methodology and types of variables
5. The ability to develop an operational definition for psychological concepts
6. The application of statistics as learned in Psychology 320/320L in psychological research.
7. The use of SPSS and/or hand computations in analyzing data from research studies.
8. The design, conduct, analysis and reporting of psychological research (i.e. APA style).
9. Develop practical skills on the collection and analysis of experimental data.
10. Understand the relation between statistics, psychological experiments and their importance.
11. Develop skills to critically evaluate research articles.
12. Develop an understanding of basic and applied research
13. Develop an understanding of group and single case research designs.

Special Note: This is a six-week summer course that meets every day, Monday through Thursday. The lecture portion is from 9AM to 10:50 AM and the lab is from 11AM to 12:50 PM. An entire 15-week semester course will be covered within this time constraint. Hence, the course is intensive and fast-paced. It is NOT a scaled down, "watered-down" version of a full semester course. Students who have other commitments during the period of May 27, 2008 to July 8th, 2008 are strongly advised NOT to take this course. Every class meeting that a student misses is equivalent to missing a week of the class during a regular semester. Nonattendance of lecture and labs will be taken very seriously by the instructor and the student will be assessed a large penalty. (Penalty is given elsewhere on this syllabus)

Psychology 321 and 321L are considered as one 4-unit course. Only one grade will be assigned to both lecture and lab sections. There are no separate grades.

321 and 321L: - grading components and evaluation.

Review of Statistics Exam		15 points
Midterm Exam		35 points.
Final Exam	:	48 points.
4 assignments		50 points
Final Research paper	:	30 points
Class Participation & Attendance		12 points
Instructor's personal evaluation		8 points
Signed Agreement		2 points
TOTAL	:	200 points. .

Every exam is an **open book and open notes** exam. The book and notes can NOT be shared by students during the exam. Doing so will result in a grade of "F" on the exam for all students involved. Midterm and final exams will consist of fill-ins, multiple choice and/or short answers. Statistics exam will consist of worked problems and conceptual questions. The dates of the statistics and midterm exam are tentative. They can be changed or altered by the instructor, but prior notice will be given. Students who miss class meetings are responsible for checking with classmates as to when changes are made to the midterm exam schedule.

The midterm exam will cover the material discussed in class, material in the text and on the lab assignments. However, the final exam is cumulative and will cover ALL lecture and reading material in the class including statistics. You may use a hand-held calculator, but not a palm-pilot, cell phone, Ipod or laptop or any electronic device that can store sentences or communicate by infrared, during the exams. NO early final exam will be given.

Letter grades for the lecture portion will be assigned using one of the following schemes. Each student will have her or his grade computed by both methods and the scheme that results in a higher grade will be the one used.

Scheme 1: Grades will be assigned using the following:
A: 190 to 200 points **A**–: 180 to 189 points **B+**: 176 to 179 points **B:** 166 to 175 points

B–: 158 to 165 points **C+**: 154 to 157 points **C**: 141 to 153 points **C–**: 134 to 140 points
D: 115 to 133 points **F**: less than 115 points

Scheme 2: Grades will be assigned using the following:
A: Top 8% **A–:** Next 4% **B+**: Next 4% **B**: Next 15% **B–**: Next 11% **C+**: Next 12%
C: Next 23% **C–**: Next 11% **D**: Next 10% **F**: Bottom 2%

There are no makeups for missed assignments or research paper. Late submission of assignments and/or research paper will not be accepted. If you are going to miss class when the lab assignment is due, you can have a classmate turn it in for you. However, the instructor is NOT responsible for assignments that are lost. Faxing or e-mailing the lab assignments to the instructor or psychology department is not allowed. Do not submit assignments or research paper under the instructor's or teaching assistant's office door. They will be discarded and you will receive a score of zero. The psychology department staff has been instructed not to accept assignments from you to avoid problems with lost lab assignments. The completed research paper will involve a typewritten manuscript following APA (American Psychological Association) style. For the research project paper, students are REQUIRED to work in **teams of 2 students**; NO EXCEPTIONS. The instructor reserves the right to void or invalidate any team of students that seems unfit (opinion of instructor) or counter productive to the class. Each research project will consist of a replication of an existing study. Students will choose from a list of topics/references furnished by the instructor no later than the beginning of 2nd week of the session. Students will be required to choose a study to be replicated and obtain approval and permission from the instructor prior to executing the study. No student will be allowed to choose a topic outside of the ones listed by the instructor. The research paper MUST be submitted in person to the instructor on or before the due date. Only one research paper will be submitted by each team, however, each student member will submit privately to the instructor a written evaluation of their research partner's contribution to the project. Where there is a gross discrepancy on the amount of work contributed the instructor may assess a penalty to one or both students. When choosing your partner be sure to choose wisely. Some students may misrepresent themselves as to their work habits and talents for research. The instructor is NOT responsible for your bad decisions and choices. Once teams are formed and written documentation is submitted to the instructor, the teams may not be altered. Any student requesting a change in research partner to the instructor after the deadline will be penalized 20 points on their final point total. Those students with special-needs (disabled students) need to consult with the instructor prior to forming a team. The entire list of approved studies is available for viewing and downloading from the instructor's website: **http://www.csun.edu/~vcpsy015/p321topics.pdf.** Topic availability is on a first-come-first-reserved basis. That is, once a topic has been selected no other team may select that topic. Choose early. All topics are of equal difficulty. Once a written submission of the topic chosen is given to the instructor, the students will NOT be allowed to change topics. Some, but not all of the lab assignments will require word processing.

Housekeeping:

Lab Assignments: To make the task or evaluating your assignments go smoothly, you are responsible for following the guidelines below. The reader will assign a zero score to your work if the work is sloppy, messy, illegible, unreadable, out-of-order, etc. It is the student's responsibility to verify credit for assignments. Listed below is the proper format. Students are responsible for the following:

1. Your pages must be **stapled**. Don't trust someone else to keep your pages together. Do not use paper clips, tape, folds, and gum. These do not work.
2. In the upper right corner of every page put
   a. Your full name b. Your student ID number c. date of submission
3. Clearly number problems
4. Answer the questions in the order assigned. The reader will not go looking for them.
5. Write clearly. You want the reader to know that you completed the work. If your writing is illegible, that may be hard to determine. Print if you have to.

Missed exams: By definition, emergencies beyond a student's control are rare events. There will **be no make-up midterm exam**. There is no statistics makeup exam. However, if for unavoidable and exceptional reasons you are unable to take the final exam, a make-up final examination is given only when circumstances beyond a student's control make it impossible to take the final. Students will be required to provide written documentation of the reason why the final exam was not taken. Make-up final exams are written individually for the student and may have a different format than the regular exam.

Grade appeals: If you believe that a mistake has been made in grading your exam or assignment, write a note describing the error, attach it to the original exam or assignment, and give it to the instructor. You have 2 working days to do this starting from the day that the midterms or statistics exam or assignments are returned to the

students. If you do not attend class, you will have to obtain your exam/assignment from your instructor during the instructor's office hours. If you are ill or have some other circumstance that will prevent you from complying with this 2-day requirement, you need to discuss this with your instructor before or during this 2-day period in order to make alternative arrangements. Appeals after 2 working days will not be considered. Please be advised that the multiple-choice portion of the exam is commonly copied before returning them to you and will compare the two when considering your appeal. If you have a concern about the lab assignment grading, you must bring this to the attention of your instructor the day your assignment is returned to you in the lab section. Because grading of the lab assignment is very straightforward, most difficulties arise due to failure to follow the guidelines for homework preparation given above. If that is so, the appeal will be denied.

Incompletes: In the event you miss the final exam, you must meet the following criteria before I can give you an Incomplete: (1) your work must be of passing quality throughout the course, e.g., your homework and midterms are passing work. If you have not taken any of the regular exams you are NOT considered to be passing the class. (2) Missing the exam was due to an emergency beyond your control that you have documented to my satisfaction, and (3) you contacted me on or before the day of the final to arrange a conference. Please be advised that I will not be around after the course is completed (for the remainder of the summer) to give a makeup test for the final exam. The earliest makeups for the final exam will occur during the Fall Semester 2008.

Cell phones and pagers: Students are asked to **turn off cell phones and pagers during class time** to respect their fellow students. Interruptions caused by said items are not conducive to a learning environment. If such interruption occurs, the student who violates this rule can anticipate a two or more point deduction from class participation and attendance for every occurrence. The instructor reserves the right to discontinue the class. The material scheduled for the remainder of the class (lecture and/or lab) will not be covered by the instructor. Also, the instructor will not answer ANY question pertaining to the material. However, every student will be held responsible for knowing the material and will most be examined on that material. In situations where a cell phone goes off during an exam, the exam period is terminated. All exams will be collected at that point. So for all class and lab meetings, turn off your cell phones. If you are expecting an important call during class time, please inform the instructor, so the proper arrangements can be made.

Class Attendance and Participation: There are 12 points available in the course for the student who attends class regularly without causing anguish and difficulties for the instructor and other students. Attendance will be taken on a random basis. If no response from the student is given at the time attendance is taken; at least 2 points will be deducted from this component of the grade. Disruptions caused by the student during class time will also result in a deduction. Attendance is taken at ANY time from 9 AM to 10:50 AM and 11 AM to 12:50 PM Monday through Thursday.. Attendance will especially be taken when assignments and exams are returned to the student. Class participation and attendance points are NOT automatic. They have to be earned. Students who do not attend class or are disruptive will earn fewer points. Disruption includes inappropriate talking in class during lectures or presentations, being late to class and disrupting the lecture, cell phone or pager activity during class, "unauthorized" cooperative activities, and showing disrespect for other students and/or instructor. Students who do not attend or is late to two or more lectures and/or lab meetings will receive a zero score on the class participation and attendance portion of the class. The student who misses and/or is late to **four lectures and/or labs** will be asked to withdrawal from the course. The student who does not withdrawal from the class will be either given an "F' grade or a grade of "WU." Behaviors are deemed disruptive, disrespectful and noisome by the opinion of the instructor only.

Plagiarizing, Cheating and "Unauthorized" Cooperation. Any student who places his/her name on work that was done by someone else will be considered as cheating. In the judgement of the instructor assignments submitted by students that appear to be a duplicate of one another will be considered as cheating. The instructor can at any time demand that the students involve submit their work to the online site www.turnitin.com to determine if the students have cheated or plagiarized. For assignments where the student is considered to be cheating, a zero score will be assigned to ALL students involved. In addition, all students involved will receive a zero score on class participation and attendance. Students are encouraged to cooperate and help each other on assignments, however, such cooperation must not be done in the view or presence of the instructor. Any group of cooperative students who engage in such behavior will be given a score of zero on the assignment and a zero score on class participation and attendance. Additionally cheating and "unauthorized" cooperation will result in a zero score on the instructor's personal evaluation. Cooperative activities must be done discreetly and away from the presence of the instructor. On exams, each student will do her/his own work and follow the rules set by the instructor. Failure to do so will result in a zero score for the exam.

The instructor provides a subjective evaluation of each student for Psychology 321 and 321L.

There will be one (1) mandatory meeting during the course. Students who missed this meeting will NOT be allowed to do a research study. NO EXCEPTIONS. As a result, the student will receive a zero score for all grade components that are related to this important class meeting. There are NO MAKEUPS for the meeting. NO EXCEPTIONS. The meeting will be with the Psychology Librarian at the Oviatt Library concerning the use

of PsycInfo. Those students who claim they have prior knowledge must also attend the meeting. The meeting date and time will be announced at a later date. The scheduled class meeting will be during class time and on the particular day. If this adjustment is NOT acceptable to you, do NOT take this course. Any student who leaves this class meeting before its official conclusion will be penalized 20 points from the final point total at the end of the term. The instructor will also attend the class meeting for the entire period. Roll will be taken. Students who come late to the meeting will be penalized 15 points from their total score in the class. Students who are rude, unattentative, leaves the meeting without instructor permission and not actively participating (judgment of instructor) will be penalized 20 points from the total number of points in the class. Any student caught with a cell phone (visual or auditory) will be asked to leave the meeting and be penalized 40 points from the total score.

Every enrolled student will be responsible for the material on the following webpage. Make this material part of your class notes since you will be examined on it. http://library.csun.edu/sballard/PSY/321.html

Some important rules to maximize your grade in the class.
Basic Rules for the Class

1. **Attend ALL lectures and scheduled lab meetings.** Attendance will be taken on a regular basis.
2. **Follow Instructor's Instructions Exactly**
3. There is NO creativity in this course. Do **NOT** make up your own rules. This is a research course with a heavy emphasis on statistics. This course is not an art or creativity class. The instructor gives specific rules that you need to follow. Failure to do so will result in a zero score for the lab assignment and exams. This will be enforced strictly this semester.
4. Where appropriate or asked, show ALL meaningful steps in your computations. Meaningful steps that are left out will result in no credit given. For example, in computing the Centile Rank, if the formula is left off, you will receive no credit. If you present your final answer of a scaled score without showing clearly the decimal answer and the rounding used, you will receive no credit.
5. You must have a calculator capable of doing statistical computations quickly. Such calculators are available for $9 or less at various places. DO NOT BUY a calculator from Staples! They are way overpriced! DO NOT buy Phillips products, they are NOT reliable and most likely fail to operate properly at crucial times. Ones by TI and Casio are fine. These calculators have special function keys to compute the mean and standard deviation. Each student is expected to know how to access these special functions on her/his calculator. The instructor or teaching assistant is NOT responsible for teaching a student how to operate his/her calculator.

Rules for Hand Computations. Violation of any of these rules when doing hand computations will result in no credit given.

1. Your answer must agree exactly with the one computed or arrived at by the instructor. Inability to do so will definitely result in points deducted.
2. Carry three (3) decimal places for ALL of your computations. Exercise rounding rules ONLY at the end of the computational problem. Failure to do so will result in **no credit** given for the question/problem regardless of whether you arrived at the solution that agrees with the instructor's.
3. For centiles (or percentiles), CEEB, deviation IQ, and McCall T-score scaled scores, the final answer is expressed as an integer (whole number; no fractions). At the end of the computation for these scaled scores, round to the nearest whole number (no decimals). Failure to round these to whole numbers will result in no credit given. Inadequate demonstration of rounding will also result in no credit given.
4. Centiles (or percentiles) are RANKS. Even though they are interpreted in terms of percentages, they are NOT percentages. Do NOT attach a percentage sign to a centile, percentile, centile rank or a percentile rank.
5. Z-scores, or standard scores are computed using numbers that are carried to 3 decimal places. They are reported to 2 decimal places. So if you need to report a Z-score, round it to 2 decimal places. However, if a Z-score is used in an intermediate step to arrive at another statistic, such as a scaled score, keep it at 3 decimal places.
6. For final answers involving percentages, they are reported as is. Do not round them to a whole number. A percentage symbol is attached to these.
7. For correlations and regression equations, 3 decimals are also carried in all computations. Correlations and regression coefficients are reported as a final answer to 2 decimal places. However, if the correlation and/or regression coefficients are used in the computation of another statistic, they must be used with 3 decimal places. If correlations and regressions, as a final answer, are not reported and rounded to 2 decimal places, no credit will be given.

8. If the problem requires you to compute a quantity that is generally reported as a whole number, such as the number of cases, or a predicted test score, these are rounded and reported as whole integer numbers.
9. The formula used to compute the standard deviation for this course will be

$$S = \sqrt{\frac{\sum (X - M)^2}{n-1}} = \sqrt{\frac{n\sum X^2 - \left(\sum X\right)^2}{n(n-1)}}$$

Topics Covered in course but not necessarily in this order.

Link between Research Methodology and Statistics
Traditional Coverage of Experimental Psychology
Science and the Scientific Approach
Problems and Hypotheses
Constructs, Variables and Definitions
Sampling and Randomness
Ethical Considerations in Conducting Behavioral Science Research
Research Design: Purpose and Principles
Inadequate Designs and Design Criteria
General Designs of Research
Research Design Applications: Randomized Groups and Correlated Groups.
Quasi-Experimental and N = 1 Designs
Nonexperimental Research
Laboratory Experiments, Field Experiments and Field Studies.
Survey Research
Writing the Research Report

Important Note concerning topics covered in the class. The instructor will be covering material at a very rapid pace. Each day in class is nearly equivalent to a week of classes during a regular term.

IMPORTANT DATES: (Tentative – Subject to Change within minimum notice.)

No Class & Lab Meeting: Thursday, May 29th. Each students if given this day to work on Assignment 1 and decide on a research team and research topic. You will not receive any extra time for these tasks!!!
Topics for Research Paper and Research Teams Due: Monday, **June 2, 2008**
Assignment 1: Review of Psychology 320/L Statistics. Due Wednesday, **June 4, 2008**
Assignment 2: PsycInfo Search. Due Wednesday, **June 11, 2008**
Statistics Exam: Thursday, **June 12, 2008**
MIDTERM: Thursday, **June 19, 2008**
Assignment 3: Identifying the type of research study, IVs and DVs. Due Monday **June 23, 2008**
Assignment 4: Analyzing a Journal Article. Due Wednesday **June 25, 2008**
No Class & Lab Meeting" Thursday, June 26th, 2008. Students are to use this day to write their research paper.
Last Day to submit electronically a draft of the research paper for a penalty free review: Friday, June 27, 2008, 10 PM PDT.
Final Paper: Due Thursday, **July 3, 2008**
FINAL EXAM: Tuesday, July 8, 2008 (10AM to 12:50PM)

Psychology 321L: Experimental Psychology Lab
Assignment 1: Statistics (20 points)

Instructions: For this assignment, you must provide **both hand computations and SPSS computer analysis**. For those problems requiring hypothesis testing, you must provide ALL five steps of a hypothesis test.

1. State the null hypothesis in statistical terms
2. State the alternative hypothesis in statistical terms
3. Compute the appropriate test statistics
4. State the decision rule and make a decision
5. State the conclusion.

Any missing steps will be considered as incorrect and points will be deducted. For hand computations, show all meaningful work. For SPSS computer material show provide a copy of the data input and SPSS output. On the computer output, circle or clearly mark the appropriate statistics requested in the problem. For hypothesis tests, mark the test statistical value. Problems must be presented in their numerical sequential order. If answers are out of the proper sequential order a penalty will be deducted from the final score. Sloppy work in the judgment of the reader will result in a minimum deduction of 5 points from the total score on the assignment. This assignment does not require word processing. A SPSS User Guide can be downloaded from the instructor's Psych 320 website. For hand computations each student is required to carry three (3) decimal places and round to the appropriate number of decimals for the reported answer.

1. A social researcher feels that people who have lived their life in wealth and have a low opinion of those who are poor will perceived themselves as having a high level of moral judgement. In order to study this, the researcher decided to develop a study to examine the relationship between attitude toward the poor and moral judgment. Out of a pool of wealthy people, thirteen wealthy adults agreed to participate in the study where they received monetary compensation for their time. These people were administered the MacDonald Poverty Scale and the Moral Judgement Measure, values from poverty values. High scores on poverty reflect negative attitudes toward the poor. High scores on moral scale reflect more mature moral values. Using the data below find the least squares equation for predicting moral judgement

Adult	1	2	3	4	5	6	7	8	9	10	11	12	13
Poverty	50	62	38	51	60	54	31	28	12	18	33	20	45
Moral	20	12	29	18	10	22	26	27	35	28	19	38	22

2. A major corporation feels strongly that older people should not be hired nor should they be allowed to be employed by the company past a certain age. They rationalize this by saying that older workers get sick more often than younger ones and as a result costs the company money. A personnel researcher wanted to determine if there was any link between age and the number of sick days used by employees. The researcher selected 13 employees at random. Six of the employees were women and seven were men. The researcher then found the age for each employee in the company records. The number of days absent from work for a 12-month period were obtained from the bookkeeper-paymaster. The data are given below. For this study the information was gathered over a 12-month period.

Employee	1	2	3	4	5	6	7	8	9	10	11	12	13
Sick Days	5	0	1	2	7	2	2	0	3	1	4	0	7
Age	35	24	55	30	29	33	43	44	47	26	37	23	39

Compute the correlation coefficient. How much of the variation between sick days and age are shared or accounted for?

3. A human factors psychologist developed a research study to see if a certain keyboard reduces the number of hand and finger injuries. The researcher recruited staff members from the word processing pool. Each person was randomly assigned to receive either the original keyboard or the new keyboard. This was done in an attempt to eliminate order effects. Each person was asked to type 25 pages of text with an apparatus strapped to each hand to determine the amount of stress placed on each finger and hand ligaments. The data are given below, where higher values indicate higher stress and greater likelihood of finger and hand injuries. Conduct the appropriate hypothesis test to determine if the new keyboard is better than the old keyboard. Note: if the new keyboard is better, we would expect it to place less stress on the hands. Use $\alpha = .01$.

Old	New
25	16
33	27
36	33
29	38
44	18
19	17
39	22
28	26
30	21

4. A cognitive psychologist wanted to study memory. She feels that the "memory course" she has developed over the period of ten years of intensive research will greatly improve the retention of information. The researcher has a wide pool of participants to

choose from. Due to the availability of participants, the researcher creates matched pairs of participants. Pairs of participants are created by matching the participants on I.Q., age, sex, and education level. Group E, the experimental group, is subjected to a "memory course" while Group C, the control group, is given intellectual tasks to perform that are equivalent in time and attention to the experimental tasks. Afterward, both groups are given a list of 20 names to remember on one presentation. The number of names retained is as follows:

Pair	1	2	3	4	5	6	7	8	9	10	11	12
Experimental	18	16	10	10	9	13	12	13	7	11	12	13
Control	15	17	9	9	10	8	9	10	5	8	13	13

Develop the appropriate hypothesis test to determine if any difference exists between experimental and control groups. Use α = .05.

5. A manufacturing company in the business of making electronic industrial strength electronic parts is interested in increasing the productivity of it's workers. To do this, they have hired a well-known and costly management-consulting firm that employs psychologists. A consulting psychologist advises the company that industrial output per worker can be increased by more than 10% in one month using a special training program. The company is also very interested in quality control and as such the present output is only 30 units a day per worker. Fifteen workers are randomly selected to take the training program and are followed for one month. Their production rates at the end of one month are as follows: 25, 32, 35, 45, 40, 50, 47, 38, 36, 30, 37, 32, 35, 37, 35. State H_0, select an appropriate test, make the test, and state conclusions.

6. Kleinke, Meeker, & Staneski (1986) identified categories of "opening lines" that individuals use when approaching persons of the opposite gender. Two such categories are direct and cute-flippant. The direct approach involves an overt statement of interest, such as "I hope you don't mind, but I'd really like to talk to you." The cute-flippant approach involves the use of humor, such as "Did anyone ever tell you that you look like a movie star?" In order to study the effectiveness of the two types of lines, a researcher asks women to imagine that they are approached in a singles bar by an attractive man who uses one or the other of the two lines. Each woman rates her anticipated reaction to each of the two types of lines on a seven-point scale where "1" indicates a very negative response and "7" indicates a very positive response. Data collected are given in the table below. Conduct the appropriate hypothesis test for the data using α = .01.

Direct	5	6	6	4	5	6	5	6	6	5	5
Cute-Flippant	4	3	4	5	3	5	4	3	4	4	5

7. In the April 14, 1980 issue of *Advertising Age,* an announcement was made about the battle between three cigarette manufacturers over which of their products yield the lowest tar content. The three brands were Carlton, NOW, and Cambridge Box. The manufacturers of each brand made claim that their brand had the lowest amount of tar and as such presented less of a health risk. In an independent research study conducted at a local university, data were gathered on these three different brands of cigarettes. Five cigarettes of each brand were measured for the amount of tar. The data are given in the table below. The researcher doubted the results provided in *Advertising Age* and wanted to determine if the three brands are really different in their tar contents. Develop the appropriate hypothesis test using a .05 level of significance. If the test is significant, determine which brand is more hazardous than the others.

Brand	Tar per cigarette (milligrams)					
Carlton	.15	.13	.22	.15	.14	.20
NOW	.24	.17	.19	.18		
Cambridge	.17	.18	.21	.23	.21	

8. An educational psychologist wanted to determine if a difference of performance could be found between three different methods of instruction. The researcher however was not allowed to select the classrooms or the students. Three classrooms were assigned to him for his research. Three different instructional methods are used to teach seventh-grade students at an all-girls junior high school. Six seventh-grade students in each of three different English classes are randomly selected and assigned to the three methods of instruction in each classroom. At the end of the semester, an achievement test is administered to all seventh-grade students. The test scores for those students that participated in the study are isolated and recorded below. Develop the appropriate hypothesis test to test a difference between classrooms, a test for the difference among instructional methods, and the existence of a joint effect between classroom and instructional method.

Classroom	Instructional Methods		
	T_1	T_2	T_3
	64	67	64
C_1	66	70	72
	79	72	83
C_2	86	79	72
	80	75	76
C_3	85	77	72

9. Given the following data:

Pupil	Sex	Age	Grade	Affiliation	Height
1	M	10	A	D	S
2	F	11	B	R	S
3	F	12	A	R	S
4	M	10	B	D	S
5	F	10	F	D	M
6	M	11	C	R	T
7	M	10	F	D	S
8	F	11	C	D	M
9	F	12	D	R	S
10	F	10	B	R	M
11	M	11	C	D	T
12	F	11	C	D	S
13	F	12	B	R	S
14	M	10	A	D	S
15	M	10	B	D	S
16	M	12	C	D	T
17	F	11	C	R	M
18	F	12	D	D	S
19	M	10	F	R	M
20	F	12	B	D	S
21	F	11	B	R	T
22	F	12	B	R	T
23	M	10	A	D	S
24	M	10	B	D	T
25	F	11	B	D	S
26	F	12	A	R	S
27	M	12	C	D	T
28	F	11	C	R	M
29	F	12	C	D	M
30	F	11	C	R	M
31	M	11	C	D	T
32	F	10	B	D	M
33	M	12	A	D	M
34	F	13	B	D	M
35	F	11	D	D	M
36	F	11	A	R	T
37	M	12	A	R	T
38	M	15	A	R	T
39	F	12	B	R	T
40	M	12	B	R	T

Construct the appropriate hypothesis test to determine if people who are short, medium or tall have a different political affiliation. Use $\alpha = 0.05$.

10. A physiological psychologist doing research on hormone and behavior hypothesized that people with different psychological disorders would possess different levels of the hormone Deloxy, which may be responsible for other psychological functions. The data below were collected at a local hospital and medical lab facility with the full cooperation of the patients and/or their legal representative. The value in the table represent scaled and rounded off blood levels of the hormone, Deloxy for people suffering from depression, (A); nonpsychiatric patients, (B); and hospitalized schizophrenics, (C). The nonpsychiatric patients are those who enter a hospital for a non-psychiatric health problem. Develop the appropriate hypothesis test to determine if the psychologists claim could be supported by the data collected below and if so, determine with a statistical test which kind of patient have a higher level of this hormone. . Use $\alpha = .05$.

Individual	A	B	C
1	13	12	9
2	12	12	3
3	12	10	8
4	14	11	6
5	16	14	11
6	13	13	7
7	9	10	5
8	11	8	9
9	12	13	8
10	13	11	9
11	14	12	
12	13		

Psychology 321L: Experimental Psychology Lab
Assignment 2: PsyInfo Search (15 points)

Part 1 of this assignment is to attend a mandatory class meeting with the University's Psychology Librarian. The date will be set and announced in class. This is a mandatory meeting. No student will be allowed to do a research project if he or she does not attend this meeting. As a result, the student can expect a failing grade in the lab portion of the class. Due to the size of the class, there will be two meeting times scheduled. Both will be during the scheduled class time. So instead of coming to lecture that day, you will be attending the lecture given by special arrangement with the librarian. You need to attend only one of these, not both. You must attend one of these. You cannot be late to this meeting. Roll will be taken. Any student not attending or comes late will not be allowed to do a research study for this class and receive a grade of "F" for the research paper and associated lab assignments. There is no makeup for this class meeting. Material from this meeting will be included the midterm and final examination.

Part 1 will consist of a 90-120 minute presentation on how to use a very important research tool in psychology: PsyInfo. This is an online search for research articles, books, and chapters relevant to a research topic of interest. This is different from online searches such as Yahoo or Google.

Part 2 of this assignment involves conducting your own online search. After you have chosen one of the research articles for replication from a list distributed by the instructor, you will need to use PsyInfo to find 6 to 9 references related to the topic under study. Each member of a team will find 6 to 9 different articles.

1. The 6 to 9 items MUST be journal articles. They cannot be books, book chapters, dissertation abstracts, etc. They must be empirically based research articles. (No review articles).
2. The articles must be in journals available in either print form in the CSUN library or in electronic form on the Internet. As of this writing only three publishers currently have full-text articles available online which a student can download. You must provide proof that the article is available to you in the CSUN library by providing a Call number of the print volume. For electronically available full-text articles, the listing of the publishers' name is adequate.
3. The article you have chosen from the list may NOT be one of the ones listed in your search.

For part 2, you will need to submit to the instructor a neatly printed and organized listing of each article chosen. Your listing is created by PsycInfo but will need editing. You are to have the following:

1. Number your articles, e.g. 1, 2, 3…
2. Title of Article
3. Author(s)
4. Source (Name of Journal, Volume, year, page numbers and publisher)
5. Abstract or summary of article.
6. Supply library Call number for non-electronically available articles.

This assignment is to be word processed or typewritten. There are ways of saving your PsycInfo information and import it into your word processor.

Assignment 3: Type of Research Study and Identifying Variables. (5 points)

In this assignment you will use the PsycInfo generated output. You are to use a photocopy of the output used in Assignment 2.

1. Choose 3 of the articles from your PsycInfo listing. Also include as a 4th item, the article that you are replicating.
2. For each of the items chosen determine the following:
   a. The type of study, e.g. true experiment, ex post facto, etc. Note: A research study may involve using more than one type of research. You need to clearly indicate this when it occurs.
   b. The independent and dependent variables is the study.

Be sure to clearly indicate which articles you are using by circling with an ink pen or marker the description given in your PsycInfo search. You may want to consult the actual article to help you do this assignment. The write-up of this assignment must be typewritten, double-spaced and with one inch margins. Handwritten versions of this

assignment will not be read and a penalty will be assessed. Penalties will be assessed for miss spelled words or badly presented material (at the opinion of the instructor).

Assignment 4: Critical Reading (10 pts.)

For this assignment each student is REQUIRED to do the following. **Completed assignments must be typewritten or word-processed** (double spaced and with 1 inch margins**)**.

1. Choose **one** of the articles listed on PsycInfo in assignments 2 and 3. Find the original printed article (primary source) for review. Make a complete copy of the article.
2. Each student team will also analyze jointly the article chosen from the list handed out by the instructor. This common article is the one you are currently replicating. Find and make a copy of that article.
3. Evaluate each article using the following form: (DO NOT DEVIATE FROM THIS FORM). Each evaluation must have steps A through M with each letter containing the appropriate heading. Follow this outline form exactly. Any deviation from this form will result in a score of zero for this assignment.

    a. Title of Article
    b. Author(s)
    c. Source - Give complete reference. Use APA style.
    d. Give the general idea of the study. What is the problem under study?
    e. What is the research hypothesis?
    f. What research method is used?
    g. What is (are) the dependent (predicted) variable(s). What is (are) the operational definition(s) of the dependent variables?
    h. What is (are) the independent variable(s) or selection variable(s)? What is (are) the operational definition(s) of the variable(s)?
    i. Give the description of the subjects used in the study.
    j. What statistical method(s) were used to analyze the data from the study?
    k. Briefly summarize the procedure of the study.
    l. What was the conclusion of the study?
    m. Using ALL of the information given in items A through L, write a coherent summary for the article. Your summary must be more detailed than the abstract provided by PsycInfo or the article. You can use the abstract as a starting model and then add the additional information requested in Steps A through L.

4. Attach the full copy articles to the evaluations. Incomplete articles (pages missing, partially copied pages, faint copies) will result in a substantial penalty. Attach a copy of your PsycInfo search. Clearly mark on the PsycInfo output, which article you chose for this assignment.

Note: These evaluations will be used in the final research paper. You will be expected to perform a similar evaluation for another 2 articles used in a previous assignment and include them in your final research paper.

The Research Paper

Teams of two students each will be formed within the first week of the session. Once these teams are formed, they may not be changed. It is highly recommended that each student choose a partner whom, if possible, they know well and trust. Complaining about your research partner later in the semester will be frowned upon and may result in a major deduction of points from the total research paper. If your partner has been inadequate, you can express it on a confidential evaluation form submitted to the instructor near the end of the semester. Certain students with specials needs will be accommodated provided adequate documentation is provided and approved by the instructor.

When two students have formed a team and chosen one of the research articles for replication, they must submit in writing to the instructor their names and the article chosen.

Once the teams are formed, the team can chose from a list of research articles distributed by the instructor a topic of interest. This will be on a first come first served basis. Each article can only be replicated or partially replicated by one team. When a team has reserved that article, no other team may request it. The instructor will not approve of two or more teams doing the same study or article.

The research studies on the list are NOT difficult to do or analyze. Since the team is doing a replication, the procedure and statistical methods are defined. Some departures are allowed when the analysis becomes too complicated for the level of this course. Students must show a clear understanding of statistics otherwise the statistical analysis of the paper will not be correct.

For each study, the researchers are to find their own participants for the study. The “Information Packet for Researchers,” published by the Psychology Department must be obtained by each student. Each study must be approved by the instructor before it can be attempted.

Each team will submit one completed research paper with he names of both students. The structure of the paper will be discussed in detail at a later date. Each paper will be written using APA style. Handouts on the APA (American Psychological Association) style of writing will be distributed to the class. However, students may wish to purchase a copy of the Publication Manual of the American Psychological Association, 5th Edition. The purchase of this book (large manual) is not required. Each research team can write an adequate paper using the handout material.

Each research team is expected to collect between 20 to 30 participants for the research study regardless of the number used in the original article. For articles that contain several studies, the research team is required only to choose one of them.

The research paper is intended to demonstrate the students’ accumulated knowledge obtained in the lecture and the 4 lab assignments.

Psychology 321 and 321L
Experimental Psychology
Summer Term 2008
Agreement Form

I, _____ certify that I have read this entire course syllabus and that I fully understand and agree to abide by all the rules, requirements and policy set forth by the instructor, department, college and university.

I also understand that I may be asked questions concerning the course syllabus on any exam given in the class. Any violations of the rules and/or requirements will result in the forfeiture of **all** points for class participation and attendance, extra credit points (if any) and also the points available from the instructor's subjective evaluation of the student.

This form must be signed and dated by me and submitted to the instructor no later than 12:50PM Monday, June 2, 2008.

Signature _____

Date _____