Methods and Statistics: Course Syllabus Psychology 2030 Section A

Instructor: Dr. Doug P. VanderLaan, Ph.D. E-mail: doug.vanderlaan@uleth.ca Office: C883 Office Hours: Tuesdays from 4:00pm to 5:00pm Class Time: Tuesday and Thursday 1:00pm to 3:50pm Classroom: C674

<u>Prerequisites</u>: Psychology 1000 (Introduction to Psychology)

Course Description:

This course serves as an introduction to scientific methods and the application of statistics to the scientific study of psychology. Topics will include descriptive and inferential statistics techniques, the scientific method and experimental design, and interpreting scientific data both in the original scientific literature, and in everyday life.

Text:

Gravetter, F. J. & Wallnau, L. B. (2011). *Essentials of Statistics for the Behavioral Sciences* (7th Edition). Thomson Wadsworth: Belmont, CA.

Moodle:

The class website is at <u>http://moodle.uleth.ca</u>. Use your username and password that you use for your uleth email.

Grading:

The following ranges will be employed in assigning grades in this course:

A + > 89.5	C+ 66.5-69.4
A 84.5-89.4	C 63.5-66.4
A- 79.5-84.4	C- 59.5-63.4
B+ 76.5-79.4	D+ 55.5-59.4
B 73.5-76.4	D 50-55.4
B- 69.5-73.4	F <49.9

In accordance with the University of Lethbridge Calendar,

A = ExcellentB = GoodC = SatisfactoryD = PoorF = Fail

Evaluation:

The evaluation for this class consists of three exams (each worth 30%) and one assignment (worth 10%). The due date for the assignment and the dates of the exams are listed below in the Course Schedule. Assignments that are handed in late without justification will not be graded.

Assignment:

The assignment for this course will be to find a newspaper or similar online article describing research that is relevant to the field of psychology. If you are unsure about whether a particular article is suitable, feel free to consult with the instructor. Once an appropriate article has been selected, write a two page critique of the study that includes the following: (1) a description of the purpose of the research described in the article, (2) a description of the research design, (3) a critique of the research design (list positive and negative attributes of the design), (4) a description of the types of statistics that should be employed by the research design, and (5) a critique of the research conclusions.

The critique must be double-spaced in 12-point, Times New Roman font. A title page is not required. Instead, please place your student name and number in the top left corner of the header section and the due date of the assignment in the top right. References are not required for this assignment, but may be included if you wish. The assignment must be handed in as a hard copy (no electronic copies), and a copy of the focal article must be included.

Other information about the course:

(1) If you are disrespectful to the instructor or other members of the class, you will be asked to leave.

(2) Additional work will not be assigned for those who wish to improve their grades.(3) Please turn off your cell phones during the lectures.

(4) Students can write missed tests if they provide appropriate documentation from a doctor stating that they were ill and that their test performance would have been seriously affected on the day of their illness. The documentation must have the doctor's name, address, and phone number. Non-medical reasons for missed exams (e.g., a death in the family) must also be supported with appropriate documentation.

Participation in Department of Psychology Research (maximum 2% bonus marks):

After your final grade has been calculated, you can have an additional 2% added onto your final grade if you have participated in some research in the Department of Psychology. This will give you an opportunity to experience how psychological research is conducted. The url for the research studies is <u>http://psychleth.sona-syustems.com</u>. Because research projects start up throughout the term, additional projects may be listed during the course of the term.

The choice to participate in research is entirely up to you. If you participate, I will

not know which research project you participated in or anything about the information you provide in the course of participating in research. Also, please remember that if you do choose to be a research participant, you are under no obligation to complete the participation and may extricate yourself from participating at any time without having to provide a reason for doing so.

Directions for Studies:

You will receive an email with your Login name and password. It is IMPORTANT that you keep this information. You will use your user name and password [psyc2030a], once you have signed in you may change your password. Please go to <u>http://psychleth.sona-systems.com</u> and sign in.

NOTE: There will be NO transferring of credits. If you are registered in another course that offers credits (a second email will be sent to you with a different email and password). Sign up in the course that you want your credits to be assigned. Further studies and timeslots will be added, please keep checking but remember this is on a first come basis. Note: there is no guarantee that all students will be able to achieve the maximum credits. The last date to participate in studies is June 19, 2012. The maximum amount of bonus marks for this course is 2

If you are experiencing problems, please contact Leanne at wehlage@uleth.ca.

COURSE SCHEDULE

Date May 8	<u>Topics Covered</u> Introduction to Statistics	Assigned Readings Chapter 1
-	The scientific method	-
May 10	Frequency Distributions Measures of central	Chapter 2 Chapter 3
	tendency	
	Variability	Chapter 4
May 15	Transformed Scores	Chapter 5
May 17	Probability	Chapter 6
May 22	EXAM 1 Science and Pseudoscience	
May 24	Probability and Samples	Chapter 7
	Introduction to hypothesis testing I	Chapter 8
May 29	Introduction to hypothesis	Chapter 8
	Introduction to the t statistic	Chapter 9
May 31	Independent t-test	Chapter 10
	Paired t-test	Chapter 11
June 5	Introduction to ANOVA	Chapters 13 and 14
June 7	Exam 2	Chamton 15
	regression I	Chapter 15
June 12	Correlation and linear regression	Chapter 15 continued
June 14	Assignment Due	
	Chi-square test Effect size	Chapter 16
June 19	Validity	
June 21	FINAL EXAM	