Statistical Methods
The University of Toledo
Department of Psychology
PSY 2100-901 CRN 13061

Instructors:	Dr. Kamala London Newton Ruam Pimentel	**Offered**:	Spring 2021
Email:	kamala.london@utoledo.edu rfranci7@rockets.utoledo.edu*	**Course Website**:	Blackboard Learn
		Class Location:	**Webex**
		Class Day/Time:	Mon., Wed. 12:55pm-2:15pm
Ofc Hours (KL): M, W 10-11 and Friday by appt		**Credit Hours**:	3
(Ruam): M 8:30am-10:30am, F 8-11am			
Office Location: UH 1880B			
Instructor Phone: 419-530-2352			

Please bookmark this link for your reading and assignments:
https://www.macmillanhighered.com/launchpad/nolanheinzen5e/15846606#/launchpad

Please bookmark for our class meetings:(on Webex) https://utoledo.webex.com/meet/kamala.london

CATALOG/COURSE DESCRIPTION
Descriptive and inferential statistics as applied to research in basic behavioral science and to clinical research.

COURSE OVERVIEW
This course provides a basic understanding of the statistics used most commonly by social scientists. Topics to be covered include summarizing data with graphs and numbers, generalizing from samples to a population, and determining the effect of one variable on another. The course will also allow you to understand research reports in social science publications and in the press. We will particularly emphasize the application of statistics, or using and interpreting the statistics (rather than the mathematical proofs underlying these statistical methods). Even students who say they have "math anxiety" can excel in this class, if they are willing to keep up with the work.

STUDENT LEARNING OUTCOMES
By the end of this class, you should be able to:
1. summarize and organize data,
2. select and calculate an appropriate statistic to decide whether a variable reliably affects another variable, or whether such findings are driven by chance,
3. critically evaluate research findings in scientific journals and in the media,
4. work with a statistical software program (SPSS), and
5. possess a basic understanding of statistics that can be built upon in future research design and statistics classes.

SPECIAL COURSE EXPECTATIONS DURING COVID-19
It's important to note that based on the unpredictability of the COVID-19 virus things can change at any time so please be patient and understanding as we move through the semester. I also ask that you keep me informed of concerns you may have about class, completing course work/assignments timely and/or health concerns related to COVID. The course will run as much like an in-person class as possible, with live lectures on web-ex. Lectures also will be recorded and posted on blackboard.

PREREQUISITES
C- or better in Math 1320 (or a higher math)

COURSE MATERIALS

LAUNCHPAD (Nolan/Heinzen, Statistics for the Behavioral Sciences 5/e LaunchPad)
Your assignments, reading, and quizzes will be done in Launchpad, so it is not possible to take the course without it.

This is an online learning management system. It includes an e-book, quizzes, videos, study aids, and more. To create a LAUNCHPAD account that is specific to our class, see below:

Here is the link to purchase: https://store.macmillanlearning.com/us/product/Statistics-for-the-Behavioral-Sciences/p/131919074X

Instructions to purchase and access:

When you select the option to purchase LaunchPad access, it will require you to first find your course. Type in the school name and instructor (London) and select this option:
Nolan/Heinzen, Statistics for the Behavioral Sciences 5/e LaunchPad
School: University of Toledo|Instructor: Kamala London Newton
LaunchPad ID: **15846606**|Course number: PSY 2100|Section number: 901

These are your options for textbooks and LaunchPad access:
1) The least expensive option is to purchase LaunchPad access for $99 for 6 months, which includes course access and the textbook online.
2) Your other option is to purchase a package with both LaunchPad access and a loose-leaf print book ($118.99, found at the link below by clicking the 'Packages' option), or to purchase LaunchPad access and a rent or purchase a print book (starting at $66.99 for a 3 month rental).
*If you chose the second option to rent or purchase a print book, be aware that **you will still need to purchase LaunchPad access.** The eBook or rental by itself costs less, but it does *not* include LaunchPad access to assignments, quizzes, and other materials specific to this course.
After you have completed this process, use this link to sign in (I highly recommend bookmarking for quick access!):
https://www.macmillanhighered.com/launchpad/nolanheinzen5e/15846606#/launchpad

INSTRUCTIONS TO DOWNLOAD E-BOOK AND USE AUDIO BOOK
You can download the e-book so you can use it off-line. Downloading it will also allow you the option of an audio book if you like to listen to the book as you read along.
In Launchpad, go to the HELP button on the upper right-hand corner, and choose to download the eBook.

TECHNOLOGY REQUIREMENTS
Students will need access to a device with a highspeed internet connection for the Webex meetings.

REQUIRED SOFTWARE (provided by UT)
You have three options for accessing SPSS. I highly recommend you download it onto your own computer.
- SPSS is available at most of the UT computer labs.
- You can download SPSS on your home computer.
- You can remotely log into the UT virtual lab to access SPSS.

For information on which labs have SPSS and for more information on downloading SPSS on your home computer visit this link:
https://libguides.utoledo.edu/stats-software/SPSS

It will tell you that you can download SPSS by going to Myut, account maintenance. If you have troubles downloading SPSS, you can also access it remotely. To remotely access SPSS, here is a webpage with instructions to install Vlab (VMware Horizon):
https://www.utoledo.edu/education/centers/carver/tutorials/virtual-lab-installation-windows.html

For the remote option, here the place to connect once downloaded VMware.
https://www.utoledo.edu/it/VLab/

COURSE EXPECTATIONS AND ASSIGNMENTS

Expectations
Students will demonstrate professional writing conventions (e.g. grammar, audience awareness, formality) appropriate to purpose and context. This should be apparent in **all of your written work** and in all communications with the instructor **including email**.

Please try to avoid multitasking during the web-ex lectures (whether you watch the lectures live or recorded). Learning statistics is like learning a new language. I strongly encourage you to attend the live lecture so you can ask questions.

Regular attendance is critical if you intend to do well in this course. I will be teaching a live class on web-ex every Monday and Wednesday from 12:55-2:15pm. Web-ex will record names of people who attend the class. I will also post recordings of these class session a couple hours after the class session. If you cannot attend a class, then you can watch the recordings later. However, I highly recommend you attend each live class so you can ask questions. Attending the live lectures will help you keep up with the course. Also, if your grade is close to a higher grade, frequent class attendance and participation will result in your grade being rounded up.
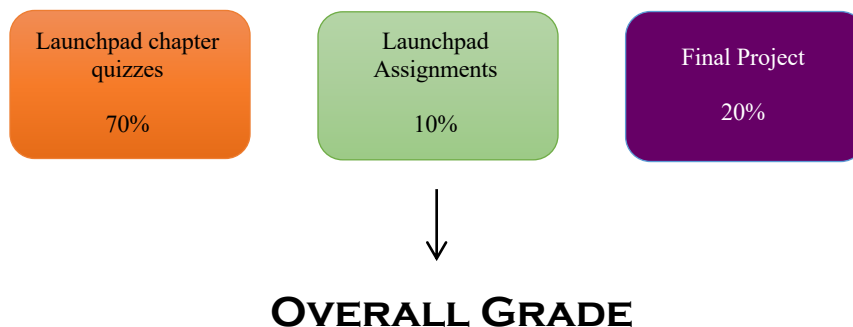
If possible, please log in to our class sessions with your video on. This will allow me to see if you have questions. Please mute your mic unless you are asking questions. This is because when multiple mics are unmuted, feedback occurs (not to mention we here all activity in the background).

Assignments
All of your assignments will be accessed and submitted in Launchpad or Blackboard. You will have three different types of assignments in the course: Chapter quizzes, Learning Curve assignments, and a Final Project.

GRADING

Your grade will be based on the following three activities:

Launchpad chapter quizzes	Launchpad Assignments	Final Project
70%	10%	20%

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OVERALL GRADE

1. **Launchpad chapter quizzes: 70% of your final grade:**
   The majority of your grade in this course is based on the average score for the Launchpad chapter quizzes which are worth between 8 and 10 points each.
   - In this course you will be responsible for learning the material that covers 17 chapters. You will be taking 17 Launchpad quizzes, one for each chapter. Quizzes are true-false, fill in blank, and multiple choice. Practice quizzes also are available. LP gives hints and allows for partial credit for getting help on questions.

   - **Due date for each Launchpad quiz is Sunday at 11:45pm following that week's material. Be sure to pay attention to these due dates. Some weeks we cover more than one chapter so two quizzes would be due.**

   - You will be able to track your grades in My Grades in Launchpad. I highly recommend you do your quizzes early, after our lecture, while the material is fresh in memory.

2. **LAUNCHPAD learning curve assignments (17 assignments, 5 pts each): 10% of your final grade:**

   - As you read through Chapters in the e-book, you will be required to complete Learning Curve assignments that make up a small portion of your grade. The Learning Curve assignments will reinforce your learning of concepts and will positively influence your grade on Launchpad quizzes and the final project.

   - **Learning curve assignments:** you can view these assignments when you log in to the course. You are required to complete several short learning curve assignments after you read through and study for each chapter. You have multiple attempts or hints to answer each question, but the points earned decrease after each hint. You can also link to the ebook reading for the question with no penalty before answering the question. The launchpad assignments should take about 20 minutes total (plus the time to read the chapter).

- **Learning curve assignments will be due by 11:45pm the evening before that chapter's web-ex class meeting.** For example, we will cover chapter 1 on 1/25, so the learning curve assignment for chapter 1 must be completed by 1/24 at 11:45pm.

3. **Final SPSS Project (20% of your grade) Due by 4/26 at 11:45pm**
   In the final project, you will apply your statistics knowledge by using SPSS to analyze and make conclusions using a class dataset. Additional information about the project will be handed out in class and posted on blackboard. Because you submit the final project in Blackboard, and because of unexpected life events, it is recommended that you submit the final project on Monday or Tuesday of the last week to leave enough time for unexpected life events.

Grading Scale

How to Calculate Overall Grade: *(Launchpad quiz average percentage) + (Final Project percentage x 0.2) + (LAUNCHPAD Learning Curve percentage x 0.1) = final grade percentage*

A = 92.5 – 100%	C+ = 77.5 - 79.99%	D- = 60 - 62.49%
A- = 90 - 92.49%	C = 72.5 - 77.49%	F = 59.9% and below
B+ = 87.5 - 89.99%	C- = 70 - 72.49%	
B = 82.5 - 87.49%	D+ = 67.5 - 69.99%	
B- = 80 - 82.49%	D = 62.5 - 67.49%	

W - if you withdraw from the course after the end of the drop period.
IN - Incomplete grades are only assigned in extraordinary circumstances beyond the student's control and only if the student has completed at least 12 Blackboard exams with a passing grade. Under no circumstances will a student be allowed to retake an entire course in order to complete this course.
Not Participating - Failure to do assignments and take exams will be reported to the registrar and such non-attendance may affect your financial aid.
Midterm Grading
Midterm grades will be based on all assignments to date in Launchpad. The midterm summary serves as a reminder of your progress and is reported to the registrar and financial aid office. A midterm grade of D or F, especially if associated with non-attendance, may place financial aid in jeopardy.

Late work is not accepted unless prearranged with the instructor. Under pre-approved circumstances late work may be accepted but may be subject to a 10% penalty per day including weekends.

ACADEMIC POLICIES
Information about UT policies is available on the following websites and summarized below.
Undergraduate Policies: http://www.utoledo.edu/policies/academic/undergraduate/

Policy Statement on Non-Discrimination on the Basis of Disability (ADA)
The University is an equal opportunity educational institution. Please read The University's Policy Statement on Nondiscrimination on the Basis of Disability Americans with Disability Act Compliance. Students can find this policy along with other university policies listed by audience on the University Policy webpage (http://www.utoledo.edu/policies/audience.html/#students).

Advising, Success Coaching and Meetings with Students
Student academic support services (academic advising, success coaching, tutoring, etc.) will continue to be offered in multiple modalities this fall including by phone, virtual chat, email, text, and face-to-face

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appointments. Due to the COVID-19 pandemic, it is recommended that 1:1 meetings with students occur online whenever possible. Please follow this link to view a comprehensive list of Student Academic and Support Services (http://www.utoledo.edu/studentaffairs/departments.html) available to you as a student

Academic Accommodations
The University of Toledo embraces the inclusion of students with disabilities. We are committed to ensuring equal opportunity and seamless access for full participation in all courses. For

students who have an accommodations memo from Student Disability Services, I invite you to correspond with me as soon as possible so that we can communicate confidentially about implementing accommodations in this course. For students who have not established affiliation with Student Disability Services and are experiencing disability access barriers or are interested in a referral to healthcare resources for a potential disability or would like information regarding eligibility for academic accommodations, please contact the Student Disability Services Office (http://www.utoledo.edu/offices/student-disability-services/) by phone: 419.530.4981 or email at StudentDisability@utoledo.edu.

SAFETY AND HEALTH SERVICES FOR UT STUDENTS
Please use the following link to view a comprehensive list Campus Health and Safety Services available to you as a student.

INCLUSIVE CLASSROOM STATEMENT
In this class, we will work together to develop a learning community that is inclusive and respectful. Our diversity may be reflected by differences in race, culture, age, religion, sexual orientation, gender identity/expression, socioeconomic background, and a myriad of other social identities and life experiences. We will encourage and appreciate expressions of different ideas, opinions, and beliefs so that conversations and interactions that could potentially be divisive turn, instead, into opportunities for intellectual and personal development.

Tentative Course Schedule

Week	Date	Reading/ Video	Topic	Launchpad Quiz Due*
Week 1	1/20	Welcome	Introduction to Course Registering in Launchpad	Quiz on LP Welcome to proceed
Week 2	1/25	Chapter 1	Intro to Statistics & Research Design	**Q1 by 1/31**
	1/27	Chapter 2	Frequency distributions	**Q2 by 1/31**
Week 3	2/1	Chapter 3	Visual displays of data	**Q3 by 2/7**
	2/3		SPSS and catch up	
Week 4	2/8	Chapter 4	Central tendency	
	2/10		Variability	**Q4 by 2/14**
Week 5	2/15	Chapter 5	Sampling & Probability	**Q5 by 2/21**
	2/17	Chapter 6	Normal curve & z scores	
Week 6	2/22		Normal curve & z scores	**Q6 by 2/28**
	2/24	Chapter 7	Hypothesis testing with Z tests	**Q7 by 2/28**
Week 7	3/1	Chapter 8	Confidence intervals, effect sizes & power	**Q8 by 3/7**
	3/3	Chapter 9	Single-sample t test	**Q9 by 3/7**
Week 8	3/8	Chapter 10	Paired samples t Test	**Q10 by 3/14**
	3/10		Instructional break- no class	
Week 9	3/15	Chapter 11	Independent-samples t Test	
	3/17		Independent-samples t Test	**Q11 by 3/21**
Week 10	3/22	Chapter 12	One-way between-groups ANOVA	
	3/24		One-way between-groups ANOVA	**Q12 by 3/28**
Week 11	3/29	Chapter 14	Two-way between ANOVA	

	3/31		Two-way between ANOVA	**Q13 by 4/4**
Week 12	4/5	Chapter 15	Correlation	
	4/7		Correlation	**Q14 by 4/11**
Week 13	4/12	Chapter 16	Regression	**Q15 by 4/18**
	4/14		Veteran's day holiday	
Week 14	4/19	Chapter 17	Chi-Square	
	4/21		Chi-square	**Q16 by 4/25**
Week 15	4/26	Chapter 18	Choosing the right statistic	**Q17 by 5/2**
			FINAL EXAM WEEK: **NO CUMULATIVE EXAM**	**Final project due 4/26 by 11:45pm**
*These descriptions and timelines are subject to change at the discretion of the instructor.				

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