



**Statistical Methods  
The University of Toledo  
Department of Psychology  
PSY 2100-003 CRN 59706**

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<b>Instructors:</b>	Dr. Kamala London Newton Riley Grady	<b>Offered:</b>	Fall 2021
<b>Email:</b>	<a href="mailto:kamala.london@utoledo.edu">kamala.london@utoledo.edu</a> <a href="mailto:rgrady@rockets.utoledo.edu">rgrady@rockets.utoledo.edu</a>	<b>Course Website:</b>	<a href="#">Blackboard Learn</a>
<b>Ofc Hours (KL):</b>	M, W 11-12 and Friday by appt	<b>Class Location:</b>	UH5000 and Webex
<b>(RG):</b>	T 11-1	<b>Class Day/Time:</b>	Mon., Wed. 9:35am-10:55am
<b>Office Location:</b>	UH 1880B	<b>Credit Hours:</b>	3
<b>Instructor Phone:</b>	419-530-2352		

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**Please bookmark this link for our LaunchPad learning platform where all readings and assignments will be available:**

<https://www.macmillanhighered.com/launchpad/nolanheinzen5e/15846606#/launchpad>

**For live meetings or office hours:**

**Dr. London** <https://utoledo.webex.com/meet/kamala.london>

**Riley Grady:** <https://utoledo.webex.com/meet/riley.grady>

**Note about the hybrid class:** All class lectures will be recorded and posted on [Blackboard Learn](#) in advance of the date for the class session. You do not need to attend class at any point in the semester, but you can if you wish. At students request, I will be available in our classroom at our scheduled class time. I also will be available in our classroom for anyone who wants assistance with our statistical software program.

### **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 commonly used 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.

## 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.**

### **Instructions to purchase and access LAUNCHPAD:**

To enroll for Launchpad please go to the following link and follow instructions:

<https://macmillan.force.com/macmillanlearning/s/article/Students-Register-for-LaunchPad-Writer-s-Help-2-0-courses-via-your-school-s-LMS-Part-1>

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: **17369016** | Course number: PSY 2100 | Section number: 003

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!):

[Nolan/Heinzen, Statistics for the Behavioral Sciences 5/e 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**.

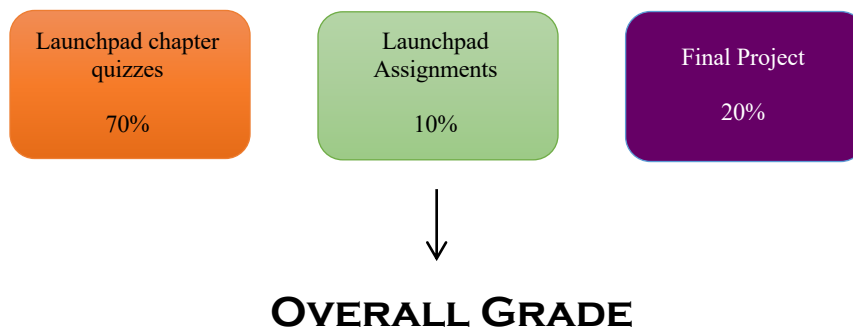
**Keeping up with the lectures and readings is essential to do well in this case.** I will post a recorded lecture onto blackboard on or before the scheduled class meeting. Please try to avoid multi-tasking as you watch the recordings. In addition, in person class meetings will be available once we get to the statistical software program, SPSS. The class attendance portion is completely optional and will not affect your grade. In person class meetings will be announced in class.

### **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:



### 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. The due dates for the quizzes are listed in the last column of our class schedule.**
- 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 we start that chapter's web-ex class meeting.** For example, we will cover chapter 1 on 9/1, so the learning curve assignment for chapter 1 must be completed by 8/31 at 11:45pm.

### 3. Final SPSS Project (20% of your grade) Due by 12/10 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

You can stay up to date on your course grade by visiting *My Grade* in Launchpad.

**How to Calculate Overall Grade:**  $(\text{Launchpad quiz average percentage}) + (\text{Final Project percentage} \times 0.2) + (\text{LAUNCHPAD Learning Curve percentage} \times 0.1) = \text{final grade percentage}$

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

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) (<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/) (<http://www.utoledo.edu/offices/student-disability-services/>) by phone: 419.530.4981 or email at [StudentDisability@utoledo.edu](mailto: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.

### **SPECIAL COURSE EXPECTATIONS DURING COVID-19**

Maintaining a safe campus during the ongoing COVID-19 pandemic remains a top priority. UToledo continues to follow the guidance of the U.S. Centers for Disease Control and Prevention and Ohio Department of Health to keep our campus safe.

### **ATTENDANCE**

The University of Toledo has a missed class policy. It is important that students and instructors discuss attendance requirements for the course. Before coming to campus each day, students should take their temperature and complete a self-assessment for symptoms of COVID-19, such as cough, chills, fatigue or shortness of breath. Anyone with a temperature at or above 100.0 degrees Fahrenheit or who is experiencing symptoms consistent with COVID-19 should not come to campus and contact their primary care physician or the University Health Center at



419.530.5549. For more information on the symptoms of COVID-19, please go to <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>

COVID-19 testing for sick students is available on both Main Campus and Health Science Campus. Call 419.383.4545 for an appointment. Absences due to COVID-19 quarantine or isolation requirements **are** considered excused absences. Students should notify their instructors and follow the protocols summarized in this document on [Navigating COVID-Related Course Concerns](#).

In the event that you have tested positive for COVID-19 or have been diagnosed as a probable case, please review the [CDC guidance](#) on self-isolation and symptom monitoring, and report the disclosure to the Division of Student Affairs by emailing [StudentAffairs@utoledo.edu](mailto:StudentAffairs@utoledo.edu) or by connecting with their on-call representative at 419.343.9946. Disclosure is voluntary and will only be shared on a need to know basis with staff such as in the Office of Student Advocacy and Support, The Office of Residence Life, and/or the Office of Accessibility and Disability Resources to coordinate supportive measures and meet contact tracing requirements.

### **FACE COVERINGS**

Face coverings are required while on campus, except while eating, alone in an enclosed space, or outdoors practicing social distancing. Students will not be permitted in class without a face covering. If you have a medical reason preventing you from wearing a face covering due to a health condition deemed high-risk by the CDC, submit an [online application](#) to request an accommodation through the Office of Accessibility and Disability Resources. Students will need to provide documentation that verifies their health condition or disability and supports the need for accommodations. Students already affiliated with the Office of Accessibility and Disability Resources who would like to request additional accommodations due to the impact of COVID-19, should contact their accessibility specialist to discuss their specific needs. You may connect with the office by calling 419.530.4981 or sending an email to [StudentDisability@utoledo.edu](mailto:StudentDisability@utoledo.edu).

### **VACCINATION**

Doctors and other health care professionals agree that the best way to protect ourselves and each other is to get vaccinated. Case data clearly show that vaccines remain highly effective at preventing serious illness from COVID, including the highly contagious delta variant. If you have not yet received your COVID vaccine, the University encourages you do so as soon as possible. No appointment is needed to get the shot at the UPMC Outpatient Pharmacy, University Health Clinic or Main Campus Pharmacy. Once you receive the COVID vaccination, please register on the COVID Vaccine Registry site at: <https://utvaccinereg.utoledo.edu/>.

### **SPECIAL NOTES**

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.

**SUMMARY OF CLASS ASSIGNMENTS.**

There are 3 main assignments in this course

1. **Learning Curves** which you do as you are reading and turn in before we cover that material;  
**Chapter quizzes** are done on the Sunday following class coverage of that topic.
2. Then a **final project** is also due towards the end of the semester.

**Learning curves are always due by 11:45 pm the night before we start a new chapter.**

**Chapter quizzes are always due by 11:45pm the Sunday after we finish a chapter.**

**Tentative Course Schedule**

<b>Week</b>	<b>Date</b>	<b>Reading/ Video</b>	<b>Topic</b>	<b>Launchpad Quiz Due*</b>
Week 1	8/30	Welcome	Introduction to Course Registering in Launchpad	Quiz on LP Welcome to proceed
	9/1	Chapter 1	Intro to Statistics & Research Design	<b>Q1 by 9/5</b>
Week 2	9/6		Happy Labor Day! (no class)	
	9/8	Chapter 2	Frequency distributions	<b>Q2 by 9/12</b>
Week 3	9/13	Chapter 3	Visual displays of data	<b>Q3 by 9/19</b>
	9/15		SPSS and catch up	
Week 4	9/20	Chapter 4	Central tendency	
	9/22		Variability	<b>Q4 by 9/26</b>
Week 5	9/27	Chapter 5	Sampling & Probability	<b>Q5 by 10/3</b>
	9/29	Chapter 6	Normal curve & z scores	
Week 6	10/4		Normal curve & z scores	<b>Q6 by 10/10</b>
	10/6	Chapter 7	Hypothesis testing with Z tests	<b>Q7 by 10/10</b>
Week 7	10/11	Chapter 8	Confidence intervals, effect sizes & power	<b>Q8 by 10/17</b>





	10/13	Chapter 9	Single-sample t test	<b>Q9 by 10/17</b>
Week 8	10/18	Chapter 10	Paired samples t Test	<b>Q10 by 10/24</b>
	10/20	Chapter 11	Independent-samples t Test	
Week 9	10/25		Independent-samples t Test	<b>Q11 by 10/31</b>
	10/27	TBA	Scientific reasoning	
Week 10	11/1	Chapter 12	One-way between-groups ANOVA	
	11/3		One-way between-groups ANOVA (Note below we are skipping Ch. 13.)	<b>Q12 by 11/7</b>
Week 11	11/8	Chapter 14	Two-way between ANOVA	
	11/10		Two-way between ANOVA	<b>Q13 by 11/14</b>
Week 12	11/15	Chapter 15	Correlation	
	11/17		Correlation	<b>Q14 by 11/21</b>
Week 13	11/22	Chapter 16	Regression	<b>Q15 by 11/28</b>
	11/24		Happy Thanksgiving (no class meeting)	
Week 14	11/29	Chapter 17	Chi-Square	
	12/1		Chi-square	<b>Q16 by 12/5</b>
Week 15	12/6	Chapter 18	Choosing the right statistic	<b>Q17 by 12/12</b>
	12/8		Optional open lab in the classroom	Final project due <b>by 11:45pm on 12/10</b>

\*These descriptions and timelines are subject to change at the discretion of the instructor.