Psychology 2100:002 - Statistical Methods

Fall 2016

TR 12:30-1:45 pm

UH 5000

Instructor: Michelle Beddow, M.S.
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Office Hours: Thursday 11-12 pm (and by appointment)
Office Location: UH 5010B
Credit Hours: 3
Class TA: Abigail McDevitt
TA email: Abigail.McDevitt@rockets.utoledo.edu

COURSE/CATALOG DESCRIPTION

Descriptive and inferential statistics as applied to research in basic behavioral science and to clinical research. Students are encouraged to take PSY 3120 Understanding Psychological Research before taking this course.

STUDENT LEARNING OUTCOMES

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). The course and text have been designed to make stats interesting, useful, and accessible to students with a wide range of mathematical ability. We believe anyone can excel as long as they are willing to keep up with the work. 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. Interpret output from 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 AND COREQUISITES

MATH 1320 (or equivalent)

REQUIRED TEXTS AND ANCILLARY MATERIALS

- *Textbook*: Jackson (2013). *Statistics Plain and Simple, 4th Ed.* ISBN-13: 978-1305638907
- *Calculator*: Anything with scientific functions. You don't need anything fancy (TI-89s or TI-85s aren't necessary), but **it cannot be your cell phone, tablet/laptop, or music player**. A general $5 calculator should be fine. If you are not sure about this, please ask the instructor.

TECHNOLOGY REQUIREMENTS

You will need to pay attention to Blackboard. Course updates, announcements, and other information you may find helpful to passing this course will be posted there. If you have trouble, click on Learner Support for help.

UNIVERSITY POLICIES

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.)

Academic Accommodations

The University of Toledo is committed to providing equal access to education for all students. If you have a documented disability or you believe you have a disability and would like information regarding academic accommodations/adjustments in this course please contact the Student Disability Services Office.

ACADEMIC POLICIES

Academic Dishonesty: Cheating will not be tolerated! The first instance of cheating will result in a zero (0) for the assignment or exam and a note in your college file. A second instance will result in an F grade for the course and a note in your college file. A low grade that results from cheating will not be deleted if you retake the course for a higher grade. Cheating includes (but is not limited to) **use of non-permitted resources** for exams or assignments such as friends, internet, books, notes, etc., or using a **cell phone** during an exam for any reason. Plagiarism involves the use of another person's words without citing a reference to assign credit to them so always use your own words in all assignments. See the university's policy on academic honesty posted in the course website in Blackboard.

Late Policy: Late exams are accepted, however, each will be penalized 20% per day late (this includes weekends!). If you need to take an exam late due to an excused absence as documented by the "University of Toledo Missed Class Policy", then written documentation is required, and extra time for completion will be determined by the instructor (please see the link on Blackboard if you are unfamiliar with UT's missed class policy). You will not be penalized if you have an excuse absence, however, failure to notify the instructor about the absence in a reasonable time will result in the above penalty.

COURSE EXPECTATIONS

Attendance: Regular attendance is crucial to succeeding in this course. Please arrive to class on time and do not leave (or start packing your things) early. I do not post the audio (or slides!) of my lectures on the course website and I do not consent to being photographed or recorded during lectures unless you have explicit permission from the University and me to do so. This includes recording of lectures on your phone, laptop, smartpen, etc. Although attendance is important, life happens and illnesses, injuries, family emergencies, etc. can arise throughout the semester. If you miss class, be sure to ask classmates for their notes, and check Blackboard for additional

materials on the topic. If you still have trouble with the topic, please see me or the class TA for help. If you have extenuating circumstances that may impact your attendance and/or performance in this course, please meet with me so that we can discuss your options.

Respect: Please be respectful to your fellow students, myself, and the TA. Disrespectful students will be asked to leave the classroom. This includes, but is not limited to, cell phone use. Please keep your phone on silent and refrain from texting during class. If you are waiting to hear back from an urgent phone call/text please let me know in advance and sit near the door so you can excuse yourself when your phone rings.

Communication guidelines: I am happy to help you if you are struggling with the course material, or have other questions. If this is the case, please either send me an email or stop by my office during office hours. If you cannot make it during my office hours, let me know and we will figure out another time to meet. As a general rule, I typically respond to emails within 24 hours. Finally, grades will not be discussed over email. If you feel that a mistake was made with your grade, please email me to set up an appointment so we can discuss this in person.

Please remember to consider emails as formal communications between you and your instructors, so use complete sentences with proper grammar and spelling when sending me emails. If I cannot understand your email, I won't be able to answer your question. This also applies to your assignments and exams, please make sure you write legibly. If I cannot read your answer, I cannot give you points (even if it is correct).

GRADING

Exams: There will be 3 exams during the semester plus 1 final exam. Each of the regular exams is worth 100 points and the final exam is worth 150 points. Exam questions will be multiple choice, matching, calculations, and short answer. Regular exams are not cumulative, however, you will find that statistical knowledge builds upon itself. So if you have not mastered the concepts learned early in this course, you will struggle to understand later concepts. The final exam will have a cumulative portion. You must bring a photo ID, pencil, and calculator (not a smartphone) to each exam. Exams will be rescheduled *only* for students who have legitimate, university-sanctioned reasons for missing the exam. If you can anticipate that you will miss an exam (e.g., for a participatory athletic event, religious holiday, etc.), please contact me via email at least *one week* prior to the scheduled exam date. If you are unable to take an exam on time due to illness or emergency, notify me by email *before* the exam is scheduled to begin.

Assignments: Assignments are essential for success in this course. The assignments will solidify your understanding of course material by giving practice. There will be 11 assignments worth 10 points each, with the lowest grade dropped (so your final assignment grade will be out of 10 assignments). I understand that life happens and so this gives you a pass in case you are ill, are dealing with a bad day, etc. Assignments must be handed in at the beginning of class on the listed due dates.

Class exercises: Although attendance is not required, you will be able to earn points by completing in-class exercises. These will be given throughout the semester as we go through the material. You must be present the day a class exercise is given in order to earn points for it.

Grading Scale

A = 93 - 100	C = 73 – 76.9
A- = 90 – 92.9	C- = 70 – 72.9
B+ = 87 – 89.9	D+= 67 – 69.9
B = 83 – 86.9	D = 63 – 66.9
B- = 80 – 82.9	D- = 60 – 62.9
C+ = 77 – 79.9	F = 59.9 and below

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 2 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 Attending - Failure to do assignments and take exams will be reported to the registrar and such non-attendance may affect your financial aid.

Final Grading

Exams (3 exams @ 100 points each + final exam @ 150 points)	450
Homework assignments (10 assignments @ 10 points each)	100
Class exercises	25
Total	575

STUDENT SUPPORT SERVICES
The University of Toledo offers academic and personal support services to help you succeed:

University Libraries are your gateway to information that connects you with the resources you need for education, research, and patient care.

Tutoring services for all UT students is available through the Learning Enhancement Center in Carlson Library, including writing.

The Writing Center provides free, face-to-face and online tutoring for writers in all disciplines. The staff can help you with a variety of writing assignments.

The Counseling Center can help you with transitioning to college and maintaining a healthy lifestyle. If you or a friend ever feel overwhelmed adjusting to college or in need of crisis intervention or mental health services, please contact the Counseling Center.

A Success Coach has been assigned to all new students to help navigate the college experience by serving as a single point of contact. Your Success Coach can help you build

skills, refer you to support services, and aid in your overall success so be sure to stay connected to him or her throughout your academic journey. If you need assistance connecting with you success coach, send an email to successcoach@utoledo.edu.

COURSE SCHEDULE

Week	Date	Topic	Reading	Assignment
1	Aug 23	Course Preview & Introduction	Module 1	
	Aug 25	Variables and Measurement	Module 2	
2	Aug 30	Data Organization	Module 3	
	Sept 1	Measures of Central Tendency	Module 4	Assignment 1 due
3	Sept 6	Measures of Variation	Module 5	
	Sept 8	Measures of Variation/Z-scores		Assignment 2 due
4	Sept 13	Standardized (Z) Scores	Module 6	
	Sept 15	Catch-up/Review day		Assignment 3 due
5	Sept 20	**Exam #1 (Modules 1-6)**		
	Sept 22	Probability	Module 7	
6	Sept 27	Probability & Samples		
	Sept 29	Hypothesis Testing	Module 8	Assignment 4 due
7	Oct 4	*No Class - Fall Break*		
	Oct 6	Hypothesis Testing; Single sample z-tests	Module 9	
8	Oct 11	t-statistic and Single-sample t-tests	Module 10	Assignment 5 due
	Oct 13	t-statistic and Single-sample t-tests		
9	Oct 18	Independent Groups t-tests	Module 11	
	Oct 20	Correlated Groups t-tests	Module 12	Assignment 6 due
10	Oct 25	Catch-up/Review Day		
	Oct 27	**Exam 2 (Modules 7-12)**		
11	Nov 1	Analysis of Variance (ANOVA)	Module 13 & 14	
	Nov 3	Analysis of Variance (ANOVA)		
12	Nov 8	RM and Two-Factor ANOVA	Module 15	Assignment 7 due
	Nov 10	RM and Two-Factor ANOVA	Module 16 & 17	
13	Nov 15	Catch up/Review Day		Assignment 8 due

	Nov 17	**Exam 3 (Modules 13-17)**		
14	Nov 22	Correlation	Module 18 & 19	
	Nov 24	*No Class – Thanksgiving*		
15	Nov 29	Correlation & Regression	Module 20	Assignment 9 due
	Dec 1	Chi-square	Module 21	
16	Dec 6	Chi-square		Assignment 10 due
	Dec 8	Catch up/Review Day		Assignment 11 due

Final Exam: Tuesday, December 13th 12:30-2:30 pm

The schedule and procedures in this course are subject to change at the instructor's discretion.

The pace of the lectures varies from year to year so the exact day a particular topic is discussed may slightly differ from this schedule. However, the topic order will not change.