PSYC 3330: Elementary Statistics for the Behavioral Sciences

tom

Spring 2017

Contact info

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Course description

Statistical methods are the primary tool for research in psychology. They are what allow us as researchers to make consistent, data-driven decisions. As such, this is an extremely important course and one that I take very seriously as your professor.

The topics we will cover this semester will include descriptive statistics (how we describe data) and inferential statistics (how we make decisions about data). Specifically, this includes central tendency, variability, correlation, the distinction between populations and samples, hypothesis testing, statistical significance, and a variety of inferential tests that we can apply to data, including t-tests and analysis of variance.

Course materials

- *Statistics for the Behavioral Sciences (10th ed.)* by Gravetter and Wallnau Amazon link
- Note: older editions of this textbook are just fine. Please feel free to find a used copy of an older edition on Amazon; it will save you a LOT of money!

Student learning outcomes

1. Identify variables under study (including independent and dependent variables)
2. Choose appropriate measures of descriptive statistics
3. Select and perform appropriate inferential statistics
4. Draw appropriate statistical conclusions from results of analyses

Requirements and grading

- Exams (450 pts)
- Unit quizzes (100 pts)
- Homework exercises (50 pts)
- *Total = 600 points*

Grades will be assigned based on the percentage of points you accumulate out of these 600 points. I will use the standard grading scale of A=90%, B=80%, etc.

Exams (75% of grade)

There will be four total exams throughout the semester, occurring approximately once every three to four weeks. They will cover material from lectures, quizzes, and homework exercises. Exam questions will be a mix of multiple choice and short answer. Exams are due by 11:59 pm on Sunday of the given week. Each exam will have a time limit and may only be attempted once.

Due dates:

- Exam 1 (Feb 12 at 11:59 pm)
- Exam 2 (Mar 12 at 11:59 pm)
- Exam 3 (Apr 23 at 11:59 pm)
- Final exam (April 30 at 11:59 pm)

Unit quizzes (17% of grade)

At the end of each unit, you will complete a quiz over the content of that unit. Each quiz counts for 10 possible points. Since there are 10 units, you will earn up to 100 points for your quiz grade.

Homework exercises (8% of grade)

In order to practice the statistical concepts you learn this semester, you will complete a short online homework assignment for each unit. Each homework assignment will be assigned on Blackboard, and you will be given unlimited attempts to do each problem. Most assignments will contain around 5 problems and be worth a maximum of 5 points. Since there are 10 units, you will be able to earn a maximum of 50 points for the semester.

Course Communication

I am your primary resource for this course. I AM an experimental psychologist, so I do the stuff I teach about daily. Hence, my primary interest is for you to learn this material and do well in the course. You may contact me using any means necessary (email is the best). That being said, many people prefer to use Blackboard messages. I don't mind these, but keep in mind that I may not receive your message until I actually open Blackboard and check those messages. I check emails much more frequently and tend to respond more quickly to those.

University Policy on "F" Grades

Beginning in Fall 2015, Tarleton will begin differentiating between a failed grade in a class because a student never attended (F0 grade), stopped attending at some point in the semester (FX grade), or because the student did not pass the course (F) but attended the entire semester. These grades will be noted on the official transcript. Stopping or never attending class can result in the student having to return aid monies received. For more information see the Tarleton Financial Aid website.

Academic Honesty

Cheating, plagiarism (submitting another person's materials or ideas as one's own), or doing work for another person who will receive academic credit are all disallowed. This includes the use of unauthorized books, notebooks, or other sources in order to secure of give help during an examination, the unauthorized copying of examinations, assignments, reports, or term papers, or the presentation of unacknowledged material as if it were the student's own work. Disciplinary action may be taken beyond the academic discipline administered by the faculty member who teaches the course in which the cheating took place.

In particular, any exam taken online must be completed without the aid of any unauthorized resource (including using any search engine, Google, etc.). Authorized resources are limited only to the official textbook and any lecture notes from the course. Any other authorized resources will be provided to you before the exam. The minimum sanction for violation of this policy is a grade of 0 on the affected exam.

Students with Disabilities Policy

It is the policy of Tarleton State University to comply with the Americans with Disabilities Act (ADA) and other federal, state, and local laws relative to the provision of disability services. Students with disabilities attending Tarleton State University may contact the Office of Disability Services at (254) 968-9478 to request appropriate accommodation. Furthermore, formal accommodation requests cannot be made until the student has been officially admitted to Tarleton State University.

Note: any changes to this syllabus will be communicated to you by the instructor!

Semester Schedule

Unit	Dates	Topic
1	Jan 16-22	Displaying data
2	Jan 23-29	Descriptives 1: central tendency, variation, and z-scores
3	Jan 30-Feb 5	Descriptives 2: correlation
	Feb 6-12	**Exam 1 (due February 12)**
4	Feb 13-19	The normal distribution: measuring likelihood
5	Feb 20-26	The logic of hypothesis testing
6	Feb 27-Mar 5	Testing means of samples of **known** populations: z-tests
	Mar 6-12	**Exam 2 (due March 12)**
	Mar 13-19	*Spring break!*
7	Mar 20-26	Testing means of samples of **unknown** populations: t-tests
8	Mar 27-Apr 2	More t-tests (independent samples, etc.)
9	Apr 3-9	Analysis of variance (ANOVA): one independent variable
10	Apr 10-16	Analysis of variance (ANOVA): two independent variables
	Apr 17-23	**Exam 3 (due April 23)**
	Apr 24-30	**Final exam (due April 30)**