



## **PSY 301-01S UNDERSTANDING STATISTICS**

**(Cross-listed with PSY 301-51R)**

COURSE SYLLABUS: SPRING 2022  
MWF 2:00pm – 2:50pm, McDowell Administration Building - 106

### **INSTRUCTOR INFORMATION**

**Instructor:** Dr. Rachel Wong

**Office Location:** Henderson 201A

**Office Hours:** [Zoom office hours] MW: 10 am to 11 am, T: 9 am to 12 pm.  
[In-person office hours by appointment; changes to office hours  
will be announced on D2L]

**Email Address:** rachel.wong@tamuc.edu

**Preferred Form of Communication:** Email

**Note.** I will NOT respond to emails without proper salutations (i.e., Dr. Wong/  
Professor Wong).

### **COURSE INFORMATION**

Materials – Textbooks, Readings, Supplementary Readings

Textbook(s) Required:

- Moore, D. S., & Notz, W. I. (2020). *Statistics: Concepts and controversies* (10<sup>th</sup> ed.). MacMillan Learning. ISBN:9781319109028  
**(Please use the 10<sup>th</sup> edition and not any other edition.)**
- Additional handouts will be distributed through D2L

Software Required:

- Statistical software (choose one):
  - JASP (free download for Windows and Mac at <https://jasp-stats.org/>), or
  - PSPP (free download for Windows and Mac at <https://www.gnu.org/software/pspp/get.html>)
- Spreadsheet processing software (e.g., Microsoft Excel, OpenOffice.org, Numbers)
- Word processing software (e.g., Microsoft Office Word, OpenOffice.org, Pages)

*The syllabus/schedule are subject to change.*

- Internet Browser (e.g., Mozilla FireFox, Google Chrome, Safari, Opera)

Calculator:

- A calculator is required. Any calculator that can process square root will do. I recommend a TI – 30Xa or Casio FX-260 SOLAR. Any other models will need my approval.

## **Course Description**

An introductory applied statistics course that focuses on descriptive and inferential statistical methods. Emphasis will be placed on learning statistics through application and experience. Topics include visual displays of data, measures of central tendency and variability, standardized scores, normal distributions, probability, sampling distributions, hypothesis testing, correlation, and regression.

In general terms, this course is about understanding the conceptual background of psychological statistics to provide you with a strong foundation for PSY 302, the next statistics course in your degree plan. The more you understand in this class, the better advantage you will have going forward into PSY 302.

**I strongly encourage you to keep your textbook and any materials you accumulate. They will be a beneficial reference going forward.**

## **COURSE REQUIREMENTS**

### **Minimal Technical Skills Needed**

- Using the learning management system (D2L)
- Using word processing software (e.g., Microsoft Word)
- Using statistical software package and/or spreadsheet software (e.g., EXCEL)
- Using a regulator calculator to complete simple statistical computations.

### **Student Responsibilities or Tips for Success in the Course**

In general, students are expected to invest six to nine hours per week into preparing for this course. To successfully complete the course, students should read the textbook and materials on D2L before class, attend each class, complete each assignment on time, and fully engage in any in-class activities that we may have. Reviewing the course material thoroughly is essential for preparing for the exams and assignments.

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## GRADING

Course grades will be determined by the following scale. See the Assessments section for more information.

Evaluation:

Participation		60 points
Assignments	(4 x 75)	300 points
Exams	(3 x 100)	300 points
Total points possible		660 points

There will be in-class quizzes throughout the semester. The points you earn on these quizzes are counted as extra credits. These extra credits will be added to your final total points before the letter grade is calculated. Research participation through the online SONA Experiment Management System (EMS) is required and extra credits will be awarded according to your participation (see below and Students' Guide to Research Participation and Student Memo handouts for details).

Final grades in this course will be based on the following scale:

**A = 89.5% - 100%**

**B = 79.5% - 89.4%**

**C = 69.5% - 79.4%**

**D = 59.5% - 69.4%**

**F = Less than 59.5%**

**Note: Grades will not be rounded!**

## Assessments

The course grade will be calculated by your performance in the following exams and assignments:

- I. **Participation** (60 points) – participation is expected in this course. Therefore, daily attendance is expected. Students will be required to submit exit tickets after each class. Students will either answer an exit ticket question posed by the instructor at the end of the lecture or list something that they are confused about. Exit tickets must be submitted in the form of a 3x5 in flashcard at the end of class.

CHEC students will submit their exit tickets via D2L.

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- II. **Exams** (3 exams; total: 300 points): Exams will constitute a portion of the grade. There will be three exams. Exams will vary in terms of format, but are likely to include both multiple-choice and short-answer/essay questions.
- III. **Assignments** (4 assignments; total: 300 points): Assignments are designed to help students review the material and familiarize with key statistical concepts. Each assignment includes questions at the end of the appropriate chapter, plus several questions that are described at the end of the Homework Assignments Rubric. See the course calendar (pp. 5-6) for the deadlines.
- IV. **Research Participation**: A goal of this class is to help you familiarize yourself with research methods. One way to obtain this goal is to have you participate in research studies. Participating in research studies contributes to students and faculty at A&M - Commerce, your understanding of how research is conducted, and human knowledge in general. All students in this class will be required to participate in the psychology department's participant pool or complete alternative assignments (see me for more information on alternative assignments).

Students must complete a total of 6 credits, and 3 or more of them have to be earned from participating in face-to-face experiments. However, if you complete your first 4 face-to-face credits without any "no-shows", you will receive 2 free punctual participant credits. This means you will only need to complete 4 credits in total, with 2 or more credits earned from face-to-face experiments. When you first sign into the experiment management system (EMS) you will be asked to take a prescreen. The prescreen takes about 20 minutes to complete. If you complete the prescreen in the first two weeks of the semester you will receive ½ free experiment credit. This can be combined with later experiments that are worth ½ credit.

If you fail to complete this portion of the class your grade will be lowered by one full grade. In effect, if you have an 'A' in the class but fail to complete your research participation (either through participating in research studies, alternative assignments, or a mixture of both) your final grade in the class will be a 'B.' More information about participating in research, such as how to log in to the EMS, is provided on D2L.

Students who are taking this course at CHEC will need to complete 6 credits of online research (or 4 credits if there are zero no shows).

## TECHNOLOGY REQUIREMENTS

### LMS

All course sections offered by Texas A&M University-Commerce have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements

LMS Requirements:

<https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

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LMS Browser Support:

[https://documentation.brightspace.com/EN/brightspace/requirements/all/browser\\_support.htm](https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm)

YouSeeU Virtual Classroom Requirements:

<https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements>

## **ACCESS AND NAVIGATION**

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or [helpdesk@tamuc.edu](mailto:helpdesk@tamuc.edu).

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

## **COMMUNICATION AND SUPPORT**

If you have any questions or are having difficulties with the course material, please contact your Instructor.

### **Technical Support**

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

<https://community.brightspace.com/support/s/contactsupport>

### **Interaction with Instructor Statement**

I am here to support you. My office hours are listed on the top of the syllabus. I will start the semester with Zoom office hours and gradually move to in-person office hours. If you would like to meet in-person on campus, please reach out to me to schedule a time. Office hours are subject to change, and I will inform students via D2L if there are any changes. If communicating via email, I do my best to respond within 2 business days of receiving an email. If you do not hear back from me within 2 business days, please email me again in case I did not receive your message. Your assignments will be graded and returned to you within two weeks.

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## EMAIL GUIDELINES

In an attempt to provide a framework for professional communication, emails must contain the following:

- Subject Line: Course (e.g. PSY 301); additional information if desired (e.g. Hypothesis testing)
- Address the Reader: Open with “Dr. Wong...”
- Use good grammar and avoid acronyms (i.e., do not write like you text)
- If asking for assistance with an issue, please list at least 3 things you have done to try and remediate the issue prior to contacting me (these should probably include looking at the syllabus/ course rubrics/ eCollege, contacting a colleague, and checking your text, etc.)
- Close with your name

Please send emails from your University account. The instructor will not discuss grades over email. If you would like to discuss your grade, please make an appointment during office hours.

If you are reading this, email me a photo of your pet (or favorite animal) based on the above email guidelines for 2 extra credit points (available up till the end of the first week of classes, 1/16/2022). ☺

## COURSE AND UNIVERSITY PROCEDURES/POLICIES

### Course Specific Procedures/Policies

This class provides a **child-friendly environment**. Students are welcome to bring their child/family under the age of 18 to class when other arrangements are not available. No prior approval is required.

**Exam:** Exams will be posted on D2L and will be taken in-class unless otherwise specified. On exam days, students are expected to bring their laptops to class. No make-up exam\* is allowed unless prearranged 48 hours prior to the actual exam date and time. You will have the length of class to complete your exam (50 minutes).

\*Make up exams will ONLY be administered to students who miss an exam for a university-approved reason (i.e., illness requiring a visit to the doctor or hospital, death in the family, court-mandated appointment). Official documentation (i.e., doctor's or hospital note, funeral notice or obituary, court document) must be submitted to instructor before a make-up exam will be administered. If you miss an exam, you are responsible for contacting the instructor on the day of or before the day of the exam.

**Plagiarism:** Texas A&M University-Commerce views plagiarism as a serious offense. Plagiarism occurs when individuals take ideas and/or words from another source and claim these ideas as their own without giving credit to the original author(s). This can include copying words from an Internet website, reading an article and taking the

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authors ideas without giving them credit, or writing work that is remarkably similar to other written work (e.g., Changing words to synonyms is still plagiarism). If any written work contains ideas that are not your own, you need to give credit to the author(s) by including citations. Instructors are obligated to report instances of plagiarism to university officials. Please refer to the American Psychology Association (APA) manual for instructions on citing materials. When in doubt, ask me. Ignorance will not be tolerated as an excuse for plagiarism. Acts of plagiarism on any written assignment, including discussion postings, will result in severe consequences, including the possibility of receiving a zero in the course. Acts of plagiarism will be reported to the department head.

**Scholarly Expectations:** All works submitted for credit must be *original works* created by the scholar uniquely for the class. It is considered inappropriate and unethical to make duplicate submissions of a single work for credit in multiple classes, unless specifically requested by the instructor. Duplication may result in a zero on an assignment.

**Late Work:** Please submit all assignments on time. When an assignment is submitted past the deadline, a 5-point penalty will be imposed for each day that the assignment is submitted past the due date, up to 5 days. After which, the assignment will automatically be scored as a zero (i.e., no credit granted). Please note that computer issues will not be considered as an excuse for failing to submit any assignment on time. It is the student's responsibility to make sure that assignments are turned in on time. Therefore, do not wait until the very end to complete an assignment. This will help ensure that you turn in the assignment on time if you are having a technology issue (i.e., you can find another computer, call the Help Desk for support, etc.).

### **Syllabus Change Policy**

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

## **University Specific Procedures**

### **Student Conduct**

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the Student Guidebook.

[http://www.tamuc.edu/student\\_guidebook/Student\\_Guidebook.pdf](http://www.tamuc.edu/student_guidebook/Student_Guidebook.pdf)

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum:

<https://www.britannica.com/topic/netiquette>

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## **TAMUC Attendance**

For more information about the attendance policy please visit the Attendance webpage and Procedure 13.99.99.R0.01.

<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

## **Academic Integrity**

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

Undergraduate Academic Dishonesty 13.99.99.R0.03

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

Graduate Student Academic Dishonesty 13.99.99.R0.10

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.pdf>

## **Students with Disabilities-- ADA Statement**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

### **Office of Student Disability Resources and Services**

Texas A&M University-Commerce

Gee Library- Room 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: [studentdisabilityservices@tamuc.edu](mailto:studentdisabilityservices@tamuc.edu)

Website: Office of Student Disability Resources and Services

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

**The Counseling Center at A&M-Commerce, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the**

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**Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit [www.tamuc.edu/counsel](http://www.tamuc.edu/counsel)**

### **Nondiscrimination Notice**

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

### **Campus Concealed Carry Statement**

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the Carrying Concealed Handguns On Campus document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

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## COURSE OUTLINE / CALENDAR

Week	Date	Topic	Readings
1	1/12	Introduction; Syllabus	
	1/14	What kind of data do we have?	
2	1/17	<b>Martin Luther King Jr. Day</b>	
	1/19	Where do data come from?	Chap. 1 & 3
	1/21	Where do data come from?	Chap. 1 & 3
3	1/24	Measuring <b>Assignment 1 due</b>	Chap. 8
	1/26	Describing data: Central tendency	Chap. 12
	1/28	Describing data: Central tendency	Chap. 12
4	1/31	<i>Review</i>	
	2/2	Describing data: Variation	Chap. 12
	2/4	Describing data: Variation (continued) <b>Assignment 2 due</b>	Chap. 12
5	2/7	Data visualization	Chap. 10 & 11
	2/9	Data visualization	Chap. 10 & 11
	2/11	<i>Review</i>	
6	2/14	<b>Exam 1</b>	
	2/16	Normal distribution	Chap. 13
	2/18	Normal distribution (standard scores & percentiles)	Chap. 13
7	2/21	Normal distribution (standard scores & percentiles)	Chap. 13
	2/23	<b>Discussion: Exam 1</b>	
	2/25	Probability	Chap. 17
8	2/28	Probability <b>Assignment 3 due</b>	Chap. 18
	3/2	<i>Review</i>	
	3/4	Sampling & sampling distribution	Chap. 21
9	3/7	Sampling & sampling distribution	Chap. 21
	3/9	Sampling & sampling distribution	
	3/11	<i>Review</i>	
	3/14	<b>Spring Break</b>	

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	3/16		
	3/18		
10	3/21	Hypothesis testing	Chap. 22
	3/23	Hypothesis testing	Chap. 22
	3/25	<i>Review</i>	
11	3/28	<b>Exam 2</b>	
	3/30	Significance testing and $p$ -values	Chap. 22 & 23
	4/1	Significance testing and $p$ -values	Chap. 22 & 23
12	4/4	Significance testing and $p$ -values	Chap. 22 & 23
	4/6	<b>Discussion: Exam 2</b>	
	4/8	Introduction to $t$ -tests	
13	4/11	Introduction to $t$ -tests	
	4/13	Two-way tables and the Chi-Square test	Chap. 24
	4/15	Two-way tables and the Chi-Square test <b>Assignment 4 due</b>	Chap. 24
14	4/18	Scatterplots and correlation	Chap. 14
	4/20	Scatterplots and correlation	Chap. 14
	4/22	<b>Instructor at AERA Conference</b>	
15	4/25	<b>Instructor at AERA Conference</b>	
	4/27	Regression, prediction, and causation	Chap. 15
	4/29	Regression, prediction, and causation	Chap. 15
16	5/2	<i>Review</i>	
	5/4	No class – Study for final	
	5/6	No class – Study for final	
		<b>FINAL EXAM 5/9 1:15 pm – 3:15 pm</b>	

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## Homework Assignments:

Be sure to notice that each homework assignment includes problems from the end of the chapters + 1-2 written response questions. These written response questions are described at the end of this document. Written response questions should be answered in a few (e.g., 2-3) sentences using **your own words**. Please type all answers to written response questions. If this means that you will need to submit more than one document (e.g., one for the worked problems scanned as a PDF and one for the typed responses in a Word document) then that is fine. Also make note that students are expected to show work for homework problems.

Specific homework problems will be posted to D2L.