

# PSY 301.01S/.51R Understanding Statistics

**COURSE SYLLABUS: FALL 2019** 

#### INSTRUCTOR INFORMATION

**Instructor:** Andrew M. Tague, Ph.D. Educational Psychology Student.

Class Location: BA338 (Commerce), CHEC217 (McKinney)

**Class Time:** 12:30pm – 1:45pm

Office Location: Commerce Campus, Binnion 212.

Office Hours: Monday and Wednesday: 1pm to 3pm

Office Phone: NA

University Email Address: atague@leomail.tamuc.edu (Preferred)

Andrew.Tague@tamuc.edu

**Preferred Form of Communication:** Email and office hours. If you want to speak to me face-to-face outside of office hours please send me an email. When possible, I am

happy to arrange a time that better fits your schedule.

**Communication Response Time:** 24 – 48 hours.

#### **COURSE INFORMATION**

## Materials - Textbooks, Readings, Supplementary Readings

#### Textbook(s) Required:

Statistics Concepts and Controversies (9<sup>th</sup> ed.) David S. Moore & William I. Notz. ISBN: 978 – 1464192937

#### Software Required:

You will need access to a version of **Microsoft Word** or an application that allows you save documents in the following formats: **.doc**, .docx, or .rtf. Your writing assignments must be turned in one of these formats, otherwise they will not be accepted. If you have a MacBook or other Apple product, <u>do not use pages</u>. I must be able to open the document with Microsoft Word.

#### Calculator Required:

A TI-30Xa calculator is required for this course. They cost anywhere from \$8-\$12 at general retailers (e.g., Target, Wal-Mart). **No graphing calculators will be allowed.** 

## **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 test 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 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**

#### **Instructional Methods**

#### Instructional Methods

This course is a face-to-face course that has been web-enhanced with myLeoOnline. Attendance is required for the course. You will also need to use myLeoOnline on a regular basis to complete assignments and access class announcements. Please see the information below for technical requirements for accessing myLeoOnline.

# Student Responsibilities or Tips for Success in the Course

#### **Questions about Grades**

Any questions about a grade for a particular assignment or exam should be brought to the professor's attention within one week of the grades for that assignment or exam being posted.

#### Students are expected to:

1. Read the assigned material, which includes following the numeric examples closely and writing down questions about anything not entirely clear to you.

Statistics requires close study and re-reading, not just reading through once as you might an ordinary book.

- 2. You must complete the readings BEFORE coming to class or the lectures won't make sense.
- 3. Attend lectures, listen closely, ask questions—being sure to have done the reading first. DON'T fall behind!
- 4. Study for, take, and review answers for exams.

#### GRADING

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

A = 90%-100%	828 – 920 points
B = 80%-89%	736 – 827 points
C = 70%-79%	644 – 735 points
D = 60%-69%	552 - 643 points
F = 59% or Below	0 – 551 points

#### **ASSESSMENTS**

# **HOMEWORK ASSIGNMENTS (10 points each)**

There will be 8 homework assignments during the semester. These assignments are designed to increase your understanding of the topics being covered and give you the opportunity to apply course material. **Due dates for homework assignments are listed below the schedule topics.** 

- 1. Assignments are to be turned in *at the start* of class, in-person. This means paper and pencil/pen. I recommend pencil.
- 2. Assignments should be handwritten neatly and all pages stabled together (no paperclips).
- 3. Show your work when solving a problem that involves formulas. As a minimum, you should show each complete formula in its basic form filled in with numbers, at least one intermediate step, and the final answer.
- Include your full name as it appears on the class roll. Remember to date and label the assignment as well. Example: Your Name, Homework #2, Month/Day/Year.
- 5. Assignments are due at the beginning of class. If you are sick during a class day, email me your assignment before the beginning of the class that assignment is
- 6. No late assignments will be accepted.
- 7. Homework assignments are a chance to apply what you have been studying. In this spirit, complete your homework assignments on your own.

- 8. Homework assignments will be graded as follows:
  - a. Each assignment is worth 10 points.
  - b. Late assignments or assignments with no work will receive 0 points.
  - c. 1 point will be deducted for each of the following:
    - i. No name on the assignment.
    - ii. Pages not stapled together.

## **WRITING ASSIGNMENTS (50 POINTS EACH)**

There are 5 writing assignments during the semester. You will write a 2-3 page (double spaced) response paper. These assignments give you the opportunity to apply what you are learning to real-world problems and issues. Papers should be turned in to the Assignments Folder designated for that particular assignment in myLeoOnline by 11:59pm on the day that they are due. **All papers must be typed in MS Word (.doc or .docx) or RTF.** 

#### **Guidelines for writing assignments:**

- 1. Assignments must be in your own words. Please do not quote the textbook or any other source.
- 2. Assignments turned in on time can earn up to 50 points for a perfect paper. Each day a paper is late, 5 points will be deducted from 50 to 45 to 40 and so forth. It can be up to 5 days late, with the potential of earning a maximum 25 points. After 11:59pm on the fifth day, no more writing assignments for that week will be accepted.
- Your paper does not need to be formal in structure (i.e., you do not need an intro/conclusion paragraph). Just be sure to answer the question(s) fully and completely.
- 4. Do not plagiarize. If you have taken this class before, do not turn in a paper that you have previously submitted, because that is a form of self-plagiarism. You will be turned into the department, and it will go on your record.

# QUIZZES (10 points each)

It is helpful to read the assigned chapters in the textbook before class. To encourage this behavior, you will be required to complete 16 online quizzes. These will be available online and will cover all of the assigned readings. Quizzes will be evenly spaced throughout the semester and are to be completed by 11:59pm on the dates specified on the schedule below. Quizzes are to be completed individually. Do not work together on quizzes.

Note: Students who can demonstrate a legitimate University-excused absence, religious holiday, or major illness are allowed to make-up one quiz during the term. Please contact me prior to when you will be missing the quiz, or within 24 hours of missing the quiz due to major accident or illness that must be approved by me.

**Note:** Please use a place with a solid WIFI connection, such as Gee library, to take your quizzes.

## **EXAMS (3 exams: 100 points each; Final exam: 130 points)**

There will be three exams throughout the semester and a final exam. <u>Exams will be cumulative</u>. On each exam, there will be questions relating to material covered on the previous exam(s). The questions will require not only recognition of concepts and correct answers, but will be designed to test comprehension and application of concepts as well. Material for the exams will be drawn from the text, and the lectures. Exams without a name will have 5 points deducted from the total exam grade. There will be no make-up exams except as mandated by University policy for University-excused absences, religious holidays and major illnesses.

Students should contact the professor **prior** to the scheduled exam if possible, or within 24 hours of missing the exam due to accident or illness. Do not skip exam day unless you have a plan in place and I approved it before the exam day takes place. If you skip exam day and it was not approved ahead of time, you will receive a "0" for your exam.

Note: Unless specifically approved by me prior to the exam, use of electronic devices (e.g., cell phones, PDAs, iPods, and the like) during the exam is strictly prohibited and will result in your exam being taken from you immediately.

#### TECHNOLOGY REQUIREMENTS

#### **Browser support**

D2L is committed to performing key application testing when new browser versions are released. New and updated functionality is also tested against the latest version of supported browsers. However, due to the frequency of some browser releases, D2L cannot guarantee that each browser version will perform as expected. If you encounter any issues with any of the browser versions listed in the tables below, contact D2L Support, who will determine the best course of action for resolution. Reported issues are prioritized by supported browsers and then maintenance browsers.

Supported browsers are the latest or most recent browser versions that are tested against new versions of D2L products. Customers can report problems and receive support for issues. For an optimal experience, D2L recommends using supported browsers with D2L products.

Maintenance browsers are older browser versions that are not tested extensively against new versions of D2L products. Customers can still report problems and receive support for critical issues; however, D2L does not guarantee all issues will be addressed. A maintenance browser becomes officially unsupported after one year.

#### Note the following:

- Ensure that your browser has JavaScript and Cookies enabled.
- For desktop systems, you must have Adobe Flash Player 10.1 or greater.

 The Brightspace Support features are now optimized for production environments when using the Google Chrome browser, Apple Safari browser, Microsoft Edge browser, Microsoft Internet Explorer browser, and Mozilla Firefox browsers.

## **Desktop Support**

Browser	Supported Browser Version(s)	Maintenance Browser Version(s)
Microsoft® Edge	Latest	N/A
Microsoft® Internet Explorer®	N/A	11
Mozilla® Firefox®	Latest, ESR	N/A
Google® Chrome™	Latest	N/A
Apple® Safari®	Latest	N/A

# **Tablet and Mobile Support**

Device	Operating System	Browser	Supported Browser Version(s)
Android™	Android 4.4+	Chrome	Latest
Apple	iOS®	Safari, Chrome	The current major version of iOS (the latest minor or <b>point</b> release of that major version) and the previous major version of iOS (the latest minor or <b>point</b> release of that major version). For example, as of June 7, 2017, D2Lsupports iOS 10.3.2 and iOS 9.3.5, but not iOS 10.2.1, 9.0.2, or any other version.  Chrome: Latest version for the iOS browser.

Device	Operating System	Browser	Supported Browser Version(s)
Windows	Windows 10	Edge, Chrome, Firefox	Latest of all browsers, and Firefox ESR.

- You will need regular access to a computer with a broadband Internet connection. The minimum computer requirements are:
  - o 512 MB of RAM, 1 GB or more preferred
  - o Broadband connection required courses are heavily video intensive
  - Video display capable of high-color 16-bit display 1024 x 768 or higher resolution
- You must have a:
  - Sound card, which is usually integrated into your desktop or laptop computer
  - Speakers or headphones.
  - \*For courses utilizing video-conferencing tools and/or an online proctoring solution, a webcam and microphone are required.
- Both versions of Java (32 bit and 64 bit) must be installed and up to date on your machine. At a minimum Java 7, update 51, is required to support the learning management system. The most current version of Java can be downloaded at:
   <u>JAVA web site</u> <a href="http://www.java.com/en/download/manual.jsp">http://www.java.com/en/download/manual.jsp</a>
- Current anti-virus software must be installed and kept up to date.

Running the browser check will ensure your internet browser is supported.

Pop-ups are allowed.

JavaScript is enabled.

Cookies are enabled.

- You will need some additional free software (plug-ins) for enhanced web browsing. Ensure that you download the free versions of the following software:
  - Adobe Reader https://get.adobe.com/reader/
  - o Adobe Flash Player (version 17 or later) https://get.adobe.com/flashplayer/
  - o Adobe Shockwave Player https://get.adobe.com/shockwave/
  - Apple Quick Time http://www.apple.com/guicktime/download/
- At a minimum, you must have Microsoft Office 2013, 2010, 2007 or Open Office.
   Microsoft Office is the standard office productivity software utilized by faculty, students, and staff. Microsoft Word is the standard word processing software, Microsoft Excel is the standard spreadsheet software, and Microsoft PowerPoint is

the standard presentation software. Copying and pasting, along with attaching/uploading documents for assignment submission, will also be required. If you do not have Microsoft Office, you can check with the bookstore to see if they have any student copies.

### **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 <a href="https://helpdesk@tamuc.edu">helpdesk@tamuc.edu</a>.

**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**

# Brightspace Support Need Help? Student 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 or click on the **Live Chat** or click on the words "click here" to submit an issue via email.



#### **System Maintenance**

D2L runs monthly updates during the last week of the month, usually on Wednesday. The system should remain up during this time unless otherwise specified in an announcement. You may experience minimal impacts to performance and/or look and feel of the environment.

#### **Interaction with Instructor Statement**

#### **EMAIL POLICY**

In addition to traditional face-to-face office hours, the instructor is available virtually by email during posted office hours. If you would like to schedule an appointment, the best way is to email. We can then set up a time to chat when it is convenient for you. During posted office hours, the instructor will return emails upon receipt. Outside of these times, please allow 24 hours to receive a response on weekdays. If you email me and do not receive an email response within, 48 hours, most likely, your email was not received.

#### **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 Mr. Tague
- Adhere to writing mechanics rules: Do not write an email like a text or Facebook message.
- 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/ Brightspace, contacting a colleague, and checking your text, etc.)
- Close with your name

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

#### COURSE AND UNIVERSITY PROCEDURES/POLICIES

## **Course Specific Procedures/Policies**

# Absence and tardiness policies

1. I will take attendance one time a week until the end of the semester, which is a total of 15 roll calls. Students who are noted as present for 12 of the 15 roll calls will receive 20 points in addition to the possible 920 points earned through homework, exams, quizzes, and writing assignments.

# **Research Participation**

As part of the course, you will have the opportunity to participate in research. This will be optional, and count as an extra credit opportunity. If you choose to participate in research, you must complete a minimum of 1.5 credit hours of research.

- 1. SONA grants credits on a time basis. A 15-minute study grants .25 credits, a 30-minute study grants .50 credits, etc.
- 2. Every .50 credit hours you complete and assign to this class will be worth 2 points.

- 3. There is no maximum limit to the amount of credit hours you can assign to this course.
- 4. More than 2 (3+) unexcused no shows as indicated by the SONA system (I can see no shows), will result in no extra credit being assigned.
- 5. You may complete an alternative assignment for extra credit instead of participating in research. This assignment will consist of 4 questions each worth 5 points, for a total possible 20 points of extra credit.

## 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 <a href="Student Guidebook">Student Guidebook</a>.

 $\underline{http://www.tamuc.edu/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.as}\\ \underline{px}$ 

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: <a href="Netiquette">Netiquette</a>
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#### **TAMUC Attendance**

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

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

#### **ADA Statement**

#### Students with Disabilities

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

Website: Office of Student Disability Resources and Services

http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServ

ices/

#### **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 <u>Carrying Concealed Handguns On Campus</u> 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.

## **COURSE OUTLINE / CALENDAR**

Week	Dates	Schedule of Topics and Exams		
		Tuesday	Thursday	
1	8/27 & 8/29	Introduction & Syllabus	Chapter 1: Where do Data Come From?  Quiz 1 Due	
2	9/3 & 9/5	Chapter 2: Samples, Good and Bad. <b>Quiz 2 Due</b>	Chapter 3: What do Samples Tell Us? Quiz 3 Due	
3	9/10 & 9/12	Chapter 5: Experiments, Good and bad  Writing Assignment 1 Due	Chapter 5 (cont.): Experiments, Good and Bad & Chapter 8: Measuring  Quiz 4 Due	
4	9/17 & 9/19	Chapter 8(Cont.): Measuring  Quiz 5 Due	Exam 1 (Ch. 1, 2, 3, 5, 8) HW #1 Due	
5	9/24 & 9/26	Chapter 10: Graphs, Good and Bad Quiz 6 Due	Chapter 11: Displaying Distributions with Graphs	

		Writing Assignment 2 Due	Quiz 7 Due
6	10/1 & 10/3	Chapter 12: Describing Distributions with Numbers  HW #2 Due	Chapter 12: Describing Distributions with Numbers & Chapter 13: Normal Distributions Quiz 8 Due
7	10/8 & 10/10	Chapter 13 (Cont.): Normal Distributions & Exam Review  Quiz 9 & Writing Assignment 3 Due	Exam 2 (Ch. 10, 11, 12, 13) HW #3 Due
8	10/15 & 10/17	Chapter 14: Describing Relationships: Scatterplots	Chapter 14: Describing Relationship Correlation  Quiz 10 Due
9	10/22 & 10/24	Chapter 15: Describing Relationships: Regression and Prediction	Chapter 15: Describing Relationship Causation  Quiz 11 Due
10	10/29 & 10/31	Chapter 17: Thinking about Chance Writing  Assignment 4 Due & HW #4 Due	Chapter 17: Thinking about Chance & Chapter 18: Probability Models  Quiz 12 Due
11	11/5 & 11/7	Chapter 18(Cont.): Probability Models	Chapter 18(Cont.): Probability Models & Exam Review

			Quiz 13 Due
12	11/12 & 11/14	Exam 3 (Chapters 14, 15, 17, 18)	Chapter 21: What is a Confidence Interval?  Writing
		HW #5 Due	Assignment 5 Due
13	11/19 & 11/21	Chapter 21: What is a Confidence Interval?  Quiz 14 Due & HW #6 Due	Chapter 22: What is a test of Significance?
14	11/26 & 11/28	Chapter 22: What is a Test of Significance? & Chapter 24: Two-Way Tables and the Chi-square Test	THANKSGIVING BREAK NO CLASS YOU ARE FREE (FOR NOW)
15	12/3 & 12/5	Chapter 24: Two- Way Tables and the Chi-square Test  Quiz 16 Due & HW #7 Due	Final Exam Review HW #8 Due

\*\* Final Exam: Thursday December 10<sup>th</sup> at 10:30am to 12:30pm

# **Homework Assignments:**

\*\*All due dates are subject to change based on where are in covering the material during lecture.

# **Homework Assignment 1:**

Producing data: 1.11, 1.21, 2.18, 2.23, 3.15, 3.22, 5.15, 5.22, 8.12, & 8.28

**Homework Assignment 2:** 

Visual Displays of Data: 10.12, 10.21, 10.31, 11.10, 11.18, & 11.23

## **Homework Assignment 3:**

Distributions: 12.12, 12.27, 12.30, 13.10, 13.15, & 13.22

# **Homework Assignment 4:**

Describing Relationships: 14.18, 14.22, 14.28, 15.10, 15.16, & 15.21

## **Homework Assignment 5:**

Probability: 17.14, 17.20, 17.26, 18.9, 18.15, & 18.22

## **Homework Assignment 6:**

Confidence Intervals: 21.11, 21.13, 21.34, & 21.38

## **Homework Assignment 7:**

Significance Tests: 22.15, 22.23, 22.26, & 22.34

## **Homework Assignment 8:**

Chi-Square Tests: 24.18, 24.24, & 24.26