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## **PSY 302 51E Statistics and Research Methods I**

COURSE SYLLABUS: Fall 2022

### **INSTRUCTOR INFORMATION**

**Instructor:** Qingwei Wang, Ph.D.

**Class Time and Location:** Monday, 4:30PM–7:10PM, CHEC Room 106

**Office Hours:** By appointment

**Psychology Office Phone:** 903-886-5940

**Office Hours:** T/Th 12:30PM-1:30PM, Binnion 211 at Commerce, M/W 9:00AM-10:30AM via zoom, by appointment

**University Email Address:** [qingwei.wang@tamuc.edu](mailto:qingwei.wang@tamuc.edu)

**Preferred Form of Communication:** The primary means of communicating with the instructor during the course will be to exchange emails or by appointment.

**Communication Response Time:** I typically answer emails within 24 hours, however, please allow 24 to 48 hours for a reply.

**Lab Instructor:** Bailey Ayers

**University Email Address:** bayers1@leomail.tamuc.edu

### **COURSE INFORMATION**

#### **Materials – Textbooks, Readings, Supplementary Readings**

##### **Textbook(s) Required**

Nestor & Schutt, *Research Methods in Psychology* (3<sup>rd</sup>)

*The syllabus/schedule are subject to change.*

ISBN: 978-1-544-32377-0

Howell, *Fundamental Statistics for the behavioral sciences* (9<sup>th</sup>)

ISBN: 978-1-305-65297-2

Stanovich, *How to think straight about psychology* (9<sup>th</sup> or 10<sup>th</sup>)

ISBN-13: 978-0-205-91412-8

ISBN-10:

0205914128

## Course Description

This course is the first part of a two-part series on statistics and research methods. This course is intended to introduce you to the basic and most common methods of collecting psychological data. We will cover ethics in research, the concepts of reliability, validity, generalizability, measurement, descriptive statistics, probability, z-scores, and the fundamentals of experimental design. Special attention will be given to writing in the style of the American Psychological Association.

The lab allows for additional time to discuss the materials covered in lecture and to work on applying what you have learned in lecture through developing a research paper. This research paper will be a hypothetical experimental study. This project is also broken up into two semesters. This semester you will write a literature review and a method and expected results section. Each week in lab will involve working on a particular portion of your research paper. All of this will culminate in an APA style research paper.

**Student Learning Outcomes** (Should be measurable; observable; use action verbs)

1. Learning to review the primary literature (improving library research skills, increasing familiarity with scientific writing, and reading journal articles)
2. Learning how research ideas are developed, including the formulation of testable hypotheses
3. Analysis of research results, including a basic understanding of descriptive statistics, probability, and percentiles
4. Produce a quality APA style report

## COURSE REQUIREMENTS

### Instructional Methods

This is a face-to-face course. Students are strongly encouraged to attend all lecture and lab meetings. If you need to miss a meeting, materials will be available on D2L.

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Importantly, most students benefit from attending class and participating in class discussions.

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

Throughout our course, we will learn the science of how to learn and practice them. The following are some basics.

- 1) Check and read class emails promptly for announcements, updates, clarifications, etc.
- 2) Take notes and participating in lectures, read the assigned parts of the textbook to check if your listening comprehension matches with the textbook descriptions, and fill in the missing pieces.
- 3) Quiz yourself often. Can you define a concept in your own words?
- 4) Complete all lab assignments and all exams.

### **Assessments**

***Course assessments include the following parts:***

1. Article Summaries
2. Completion of Exams.
3. Completion of a term project.
4. Lab Participation

#### ***1. Article Summaries:***

You will be provided with 2 empirical articles on a research topic in the beginning of class. Each summary is worth 20 points.

You will need to read the article thoroughly, and then write 1-2 pages (double-spaced in 12pt Times New Roman font), summarizing the article. I will provide you with detailed instructions in the beginning of this class. But mainly, you will be summarizing what the researchers' main research question was, why they were interested in it, how did they test it, and what did they find based on their results.

#### ***2. Exams:***

There will be three exams given during the semester. These three exams will be weighted equally. If you need to miss an exam for any reason, let me know IN ADVANCE. If you miss an exam and do not let me know in advance, but have a documented excuse (e.g., a doctor's note), there will be a chance to complete a make-up exam, but with an automatic 10-point deduction (loss of a letter grade) on the exam.

#### ***3. Term Project:***

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Another major graded assignment for the course is a term project. The purpose of this assignment is for you to get experience with the overall process of conducting scientific, experimental research.

Students will conduct a brief APA style literature review. This will later serve as the introduction to your final paper in the second semester. Your literature review must include 6 or more references; all should be from reputable scholarly sources and at least 4 of your references must primarily contain reports of empirical research. No secondary sources may be included. Your paper must be double-spaced in MS Word with 12 pt. TNR font and 1" margins on all 4 sides. Your paper must be 5-7 pages long (this includes your title page but reference pages). Some feedback will be provided and you are expected to make changes to the introduction of your final paper accordingly.

In addition to the literature review/ Introduction, the following two sections are to be included in the final submitted term paper. Details of the literature review will be provided in class as we progress.

- a. **Operational Definitions** – Students will list and operationally define all variables in their study. The purpose of this exercise is to get students be familiar with how to define the variables in an experimental design.
- b. **Hypotheses and Expected Results section**– Students will write the hypotheses and expected results section as if this were a proposal.

#### 4. **Lab Participation:**

The lab allows students to put into practice the material covered in each textbook chapter. You will be expected to learn how to think scientifically, and an important part of this scientific thinking is practice. By doing exercises and developing research ideas, you will be able to acquire a clear understanding of what comprises scientific research in psychology.

- **Ethical Training** - Students must complete the CITI ethics training in lab. Failure to complete the training on time will result in a loss of 10% on your final course grade.
- **Lab Participation** – Students must enroll and participate the Lab section. Failure to lab requirements will result in a loss of 10% on your final course grade.

#### 5. **Research Participation (SONA Extra Credits):**

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. For this course, participating in research through SONA system will be extra

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credit. You will have the opportunity to earn up to 25 points depending on the amount of research you participate in. Each credit hour of research will be worth 5 extra credit points that will be added to your total pool of points. So, for example, if you participate in 5 credit hours of research, you will earn the full 25 extra points. For more information, please visit D2L and check the extra credit research participation documents once available.

#### **6. Late Work:**

Students are required to submit each assignment by the close date indicated in the course outline. Late work will not be accepted without a verifiable excuse. Regardless of the reason, points will be deducted on all late work.

**7. Attendance** – Attendance will be taken daily. Each student is permitted two unexcused absences. If you need to miss class or arrive late, you must inform the instructor via email BEFORE class or provide documentation (e.g., doctor's note). Note that active military, reservists, and students representing the university through sports, music, dance, etc., are excused on dates they are deployed/traveling for those obligations.

**\*\* Note: Excessive unexcused absence** will result in a loss of 10% on your final course grade (i.e., loss of a letter grade).

## GRADING

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

#### **Grading:**

Article Summary (20x2)	40
Term Paper	60
Exams (100x3)	300
Total	400

Maximum Extra Credits: SONA (25 points)

A = 400 - 360  
 B = 359 - 320  
 C = 319 - 280  
 D = 279 - 240  
 F = <239

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**\*\*Note:** In addition to the above grading criteria, your final course grade will also take into consideration of your lab participation and grades.

## **COURSE REQUIREMENTS**

### **Minimal Technical Skills Needed**

Using the learning management system (D2L), searching the Internet for texts, using Library resources.

### **Instructional Methods**

The primary teaching method for this course will be lecture peppered with class discussion and in-class activities designed to elucidate information from the text and lecture.

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

- 1) Check and read class emails promptly for announcements, updates, clarifications, etc.
- 2) Take notes as you listen to lectures, read the assigned parts of the textbook to check if your listening comprehension matches with the textbook descriptions, and fill in the missing pieces.
- 3) Quiz yourself often. Can you define a concept in your own words? Can you answer 3 or 4 questions of the textbook practice questions correctly?
- 4) Review the materials on a regular basis. Consider the Pomodoro technique. Set aside 20-25 minutes each time and study.

## **Counseling Center at A&M-Commerce**

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 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)

## **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.

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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
Browser	Supported Browser Version(s)	Maintenance Browser Version(s)
Apple® Safari®	Latest	N/A

### Tablet and Mobile Support

Device	Operating System	Browser	Supported Browser Version(s)
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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, D2L supports 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.
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:
  - 512 MB of RAM, 1 GB or more preferred
  - Broadband connection required
  - Courses are heavily video intensive
  - Video display capable of high-color 16-bit display 1024 x 768 or higher resolution
- **For YouSeeU Sync Meeting sessions 8 Mbps is required.** Additional system requirements found here:  
<https://support.youseeu.com/hc/enus/articles/115007031107-Basic-System-Requirements>
- 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: [JAVA web site http://www.java.com/en/download/manual.jsp](http://www.java.com/en/download/manual.jsp)

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- 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/) <https://get.adobe.com/reader/>
  - [Adobe Flash Player](https://get.adobe.com/flashplayer/) (version 17 or later) <https://get.adobe.com/flashplayer/>
  - [Adobe Shockwave Player](https://get.adobe.com/shockwave/) <https://get.adobe.com/shockwave/> ○ [Apple Quick Time](http://www.apple.com/quicktime/download/) <http://www.apple.com/quicktime/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 [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.

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## **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**

If you contact me or a teaching assistant and do not receive an email response within 48 hours (excluding weekends), most likely, your email was not received.

Grades/Feedback on assignments will typically be given within one week, but may take up to two weeks for longer assignments or busier times of the semester.

## **COURSE AND UNIVERSITY PROCEDURES/POLICIES**

### **Course Specific Procedures/Policies**

There will be NO after the fact make-up examinations and late assignments will not be accepted (except in cases of military deployment). If you are traveling and representing the university (e.g., band members, athletes, etc.) you need to request accommodations BEFORE an exam is due, not after. Otherwise I drop the lowest exam score to account for potential emergencies.

### **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.

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## 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/Admissions/oneStopShop/undergraduateAdmissions/studentGuidebook.aspx>

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

<http://www.albion.com/netiquette/corerules.html>

### 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>

## **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](mailto:studentdisabilityservices@tamuc.edu)

Website: [Office of Student Disability Resources and Services](#)

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

### **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>

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Pursuant to PC 46.035, the open carrying of handguns is prohibited on all Texas A&M -Commerce campuses. Report violations to the University Police Department at 903886-5868 or 9-1-1.

### Course Calendar

Week	Date	Topic	Notes
1	08/29	Introductions and syllabus/why do research? (Stanovich: Ch 1 Ch 4)	<b>Lab:</b> Introduction
	09/05	<b>No Class</b>	<b>Labor Day</b>
2	09/12	The basics of Research Design (Nestor Ch1, 2 & Howell Ch 2)	<b>Lab:</b> How to read journal articles
3	09/19	Ethics (Nestor Ch 4)	<b>Lab:</b> APA formatting and plagiarism
4	09/26	Exam 1 Week	Exam 1 and Article Summary 1 due by Sunday (10/02) 11:59PM
5	10/03	Describing data: Central tendency (Howell Ch 4) Describing data: Variance (Howell Ch 5)	CITI Training Due by Sunday 10/09, 11:59PM
6	10/10	Normal Distribution and z-tests (Howell Ch 5, 6) (Nestor 3, 16)	<b>Lab:</b> How to write a literature review
7	10/17	Normal Distribution and z-tests (Howell Ch 5, 6; Nestor Ch 3, 16)	<b>Lab:</b> How to write a reference page
8	10/24	Exam 2 Week	Exam 2 and Article Summary 2 due by Sunday (10/30) 11:59PM
9	10/31	Central Limit Theorem (Howell Ch 12, 13)	<b>Lab:</b> Organizing your paper and making an outline

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10	11/07	Central Limit Theorem & One Sample t- test (Howell Ch 12)	<b>Lab:</b> Work on Literature Review & Operational define measures
11	11/14	Confidence Interval and One Sample t-test (Howell Ch 12)	<b>Lab:</b> Work on Literature Review & Create hypotheses and expected results
12	11/21	Related t-test (Howell Ch 13)	Literature Review <b>Draft</b> due Sunday (11/27) 11:59PM
13	11/28	Hypothesis Testing (Howell Ch 8)	<b>Lab:</b> Work with Lab Instructor on revisions
14	12/05	Wrap up Literature Review /Review for Final Exam	<b>Final</b> Literature Review due Sunday (12/11) 11:59 PM
15	12/12- 12/16	Final Week	Final Exam

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