

**Sul Ross State University**  
**Department of Business Administration**  
**QTMS 5309 Quantitative Analysis and Decision Theory for Business**  
**ONLINE**  
**Fall 2022**

**Course Instructor:** MJ Saucedo, PhD, CPA  
**Office:** A113  
**Office Phone:** (830) 279-3034  
**Cell Phone:** (956) 245-0912  
**Fax:** (830)279-3016  
**Email:** Maryjane.sauceda@sulross.edu

**Office Hours:**

Monday 12:00 – 6:00 PM Online  
Wednesday 8:00 – 12:00 AM Online  
Other Times by Appointment

**Course Description:**

A study of decision-making under uncertainty, decision-making under risk, decision trees, utility theory, linear regression, time series forecasting models, linear programming (graphical method and simplex method), and project management (PERT/CPM). (MBA Core Course) Prerequisite: QMTS 4311

**Required Course Materials:**

**APPLIED STATISTICS IN BUSINESS AND ECONOMICS, 6<sup>th</sup> edition (eBook)**  
By David Doane  
ISBN: 978-1-259-95759-8

**CONNECT ACCESS CODE REQUIRED**

**Course Grading**

Homework	60%
Report	10%
Exams	30%
Total Points	100%

Your grade will be based on the following scale:

A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	59% and below

## **Homework & Exams**

### **HOMEWORK AND EXAMS WILL NOT BE ACCEPTED LATE.**

If a student misses an exam, it must be made up within one week of the exam date. Please read the syllabus and follow the timeline on assignments. All homework and exams will be completed on CONNECT and an access code is required to be purchased.

Please read the syllabus and follow the timeline on assignments.

## **Report**

**Please note that all reports will be submitted using SafeAssign. If a SafeAssign score higher than 35% is assigned to the report, a grade of zero (0) will be assigned to the report. Students will have three opportunities to submit the report, however only the LAST SUBMISSION will be graded.**

### **REPORT WILL NOT BE ACCEPTED LATE.**

## **Report – Hypothesis Testing, Multiple Regression, Time Series Analysis and Chi-Square**

The Research Paper (at least 6 pages) is to be written on a 12 font, using Times New Roman, double spaced, with a one inch margin, and follow APA format. All reports require a cover page, abstract, and references page and do NOT count toward the page requirement.

Three references are required. Your textbook does not count as a reference. Please do NOT use Wikipedia or Investopedia as a reference.

All research papers are to be submitted by BlackBoard and will be submitted to Safe Assign

The required format follows:

**Explain hypothesis testing, type I and type II errors, and one-tailed and two-tailed tests (2 pages required).**

**Explain when a multiple regression model is needed, what is an adjusted R<sup>2</sup>, what is multicollinearity tests (2 pages required).**

**Explain when a time series analysis is required; and what is a Chi-Square Test for Independence tests (2 pages required).**

## **Department of Business Administration MBA Student Learning Outcomes**

SLO 1 Students will be able to analyze and solve business problems across major business functions, using fundamental business principles and strategies

SLO 2 Students will be able to communicate about contemporary business-related topics.

SLO 3 Students will be able to comprehend the impact of ethical and social responsibility in business

### **Marketable Skills -- Master of Business Administration**

1. Students will apply the principles of business to the management of existing businesses or the creation of new businesses.

2. Students will use appropriate information from research and analysis to make informed decisions.

3. Students will be able to write business correspondence including letters, emails, reports, and resumes.

4. Students will be able to make effective oral presentations to both professional and general audiences.

### **SRSU Disability Services**

Sul Ross State University (SRSU) is committed to equal access in compliance with Americans with Disabilities Act of 1973. It is SRSU policy to provide reasonable accommodations to students with documented disabilities. It is the student's responsibility to initiate a request each semester for each class. RGC students seeking accessibility services should contact Paulette Harris, Executive Assistant to the Vice President and Dean, at 830-279-3023 or email [pharris@sulross.edu](mailto:pharris@sulross.edu). Ms. Harris's office is at 2623 Garner Field Road, Uvalde, TX 78801 (this is the mailing address, too).

### **SRSU Distance Education Statement**

Students enrolled in distance education courses have equal access to the university's academic support services, such as library resources, online databases, and instructional technology support. For more information about accessing these resources, visit the SRSU website. Students should correspond using Sul Ross email accounts and submit online assignments through Blackboard, which requires secure login. Students enrolled in distance education courses at Sul Ross are expected to adhere to all policies pertaining to academic honesty and appropriate student conduct, as described in the student handbook. Students in web-based courses must maintain appropriate equipment and software, according to the needs and requirements of the course, as outlined on the SRSU website. Directions for filing a student complaint are located in the student handbook.

### **Classroom Climate of Respect**

Importantly, this class will foster free expression, critical investigation, and the open discussion of ideas. This means that all of us must help create and sustain an atmosphere of tolerance, civility, and respect for the viewpoints of others. Similarly, we must all learn how to probe, oppose and disagree without resorting to tactics of intimidation, harassment, or personal attack. No one is entitled to harass, belittle, or discriminate against another on the basis of race, religion,

ethnicity, age, gender, national origin, or sexual preference. Still we will not be silenced by the difficulty of fruitfully discussing politically sensitive issues.

### **Diversity Statement**

I aim to create a learning environment for my students that supports a diversity of thoughts, perspectives and experiences, and honors your identities (including race, gender, class, sexuality, religion, ability, socioeconomic class, age, nationality, etc.). I also understand that the crisis of COVID, economic disparity, and health concerns, or even unexpected life events could impact the conditions necessary for you to succeed. My commitment is to be there for you and help you meet the learning objectives of this course. I do this to demonstrate my commitment to you and to the mission of Sul Ross State University to create an inclusive environment and care for the whole student as part of the Sul Ross Familia. If you feel like your performance in the class is being impacted by your experiences outside of class, please don't hesitate to come and talk with me. I want to be a resource for you.

### **Academic Integrity**

Students in this class are expected to demonstrate scholarly behavior and academic honesty in the use of intellectual property. A scholar is expected to be punctual, prepared, and focused; meaningful and pertinent participation is appreciated. Examples of academic dishonesty include but are not limited to: Turning in work as original that was used in whole or part for another course and/or professor; turning in another person's work as one's own; copying from professional works or internet sites without citation; collaborating on a course assignment, examination, or quiz when collaboration is forbidden.

### **Libraries**

#### **The Bryan Wildenthal Memorial Library in Alpine**

Offers FREE resources and services to the entire SRSU community. Access and borrow books, articles, and more by visiting the library's website, [library.sulross.edu](http://library.sulross.edu). Off-campus access requires logging in with your LoboID and password. Librarians are a tremendous resource for your coursework and can be reached in person, by email ([srsulibrary@sulross.edu](mailto:srsulibrary@sulross.edu)), or phone (432-837-8123).

#### **The Southwest Texas Junior College (SWTJC) Libraries**

The Southwest Texas Junior College (SWTJC) Libraries at Uvalde, Del Rio, and Eagle Pass. Offer additional access to library spaces and resources. Del Rio, Eagle Pass, and Uvalde students may also use online resources available through SWTJC website, [library.swtjc.edu](http://library.swtjc.edu). The SWTJC Libraries serve as pick-up locations for InterLibrary Loan (ILL) and Document Delivery from the Alpine campus.

## Course Assignments

**QTMS 5309**  
**Quantitative Analysis and Decision Theory for Business**  
**Chapter Assignments\***  
**Fall 2022**

<b>Date</b>	<b>Chapter</b>	<b>Exercises &amp; Problems</b>	
8/22/2022	1	Overview of Statistics	Homework on Connect Due 8/28/22
	2	Data Collection	Homework on Connect Due 8/28/22
8/29/2022	3	Describing Data Visually	Homework on Connect Due 9/4/22
	4	Descriptive Statistics	Homework on Connect Due 9/4/22
9/5/2022	5	Probability	Homework on Connect Due 9/11/22
9/12/2022	6	Discrete Probability Distributors	Homework on Connect Due 9/18/22
9/19/2022	7	Continuous Probability Distributions	Homework on Connect Due 9/25/22
9/26/2022	8	Sampling Distributions and Estimation	Homework on Connect Due 10/2/22
<b>10/3/2022</b>		<b>EXAM I – CHAPTERS 1 – 8</b>	<b>Due 10/9/22</b>
10/10/2022	9	One-Sample Hypothesis Testing	Homework on Connect Due 10/16/22
	10	Two-Sample Hypothesis Testing	Homework on Connect Due 10/16/22
10/17/22	11	Analysis of Variance	Homework on Connect Due 10/23/22
10/24/2022	12	Simple Regression	Homework on Connect Due 10/30/22
<b>10/31/2022</b>		<b>EXAM II – CHAPTERS 9 – 12</b>	<b>Due 11/6/22</b>
11/7/2022	13	Multiple Regression	Homework on Connect Due 11/13/22
	14	Time-Series Analysis	Homework on Connect Due 11/13/22
<b>11/14/2022</b>		<b>Last Day to Withdraw with a “W”</b>	
	15	Chi-Square Tests	Homework on Connect Due 11/20/22
11/21/2022	16	Nonparametric Tests	Homework on Connect Due 11/27/22

**11/28/2022**

**REPORT Due 12/1/22**

**12/2/2022**

**EXAM III – CHAPTERS 13 – 16 Due 12/2/22**

**\*Assignments Subject to Change**