Course Syllabus

GBAR 5309 Quantitative Analysis & Decision Theory For Business

Spring II 2026

Class: GBAR 5309
Class Time: Asynchronous
Instructor: MJ Sauceda, PhD, CPA
Office: A113

Credits: 3
Location: Online Asynchronous
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Office Hours: MT 3 - 6 PM
ThF 8 – 11 AM

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Required Materials:

Textbook:

1. "Applied Statistics in Business and Statistics. 7th edition (eBook) By David Done, ISBN: 978-1-264-09856-9
2. CONNECT Access Code

Course Description:

This course teaches students about decision-making under uncertainty and risk. It discusses the how to apply decision trees, utility theory, linear regression, time series forecasting models, linear programming to improving data driven decision making. Students also learn how to apply emerging technology in the collection of data and its analysis for use in decision making. (MBA Core Course).

Course Learning Outcomes: Upon successful completion of the course, students will:

1. Students will apply statistical concepts and probability models to analyze uncertainty and support data-driven business decisions.

2. Students will be able to collect, organize, visualize, and summarize data using appropriate descriptive and graphical techniques.

3. Students will be able to conduct inferential statistical analyses, including hypothesis testing, regression, chi-square, and nonparametric methods, to draw valid conclusions about populations.

MBA Learning Outcomes: Upon successful completion of the MBA students will:

1. The ability to collect, evaluate and analyze data to make informed business decisions.

2. Demonstrate business leadership skills through the development of innovative solutions to complex problems that satisfy the needs of the multiple stakeholders of the organization.

3. The ability to design sustainable business models that ensure long-term competitive advantage in the ever-changing global economy.

4. The ability to recognize major digital trends impacting business and adapt their organization to leverage these trends into a competitive advantage.

MBA Marketable Skills:

Upon successful completion of the MBA students will have the following markable skills:

1. The ability to use software to analyze and report data.

2. The ability to work with others to solve problems.

3. The ability to communicate effectively.

4. The ability to use the latest digital technology.

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. Students should also avoid using open AI sources ***unless permission is expressly given*** for an assignment or course. Violations of academic integrity can result in failing assignments, failing a class, and/or more serious university consequences. These behaviors also erode the value of college degrees and higher education overall.

Classroom Climate of Respect: 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 other students.

Counseling: Sul Ross has partnered with TimelyCare where all SR students will have access to nine free counseling sessions. You can learn more about this 24/7/356 support by visiting Timelycare/SRSU. The SR Counseling and Accessibility Services office will continue to offer in-person counseling in Ferguson Hall room 112 (Alpine campus), and telehealth Zoom sessions for remote students and SRSU International students.

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/. Off-campus access requires logging in with your LobolD and password. Librarians are a tremendous resource for your coursework and can be reached in person, by email (srsulibrary@sulross.edu), or by phone (432-837-8123). No matter where you are based, public libraries and many academic and special libraries welcome the general public into their spaces for study. SRSU TexShare Cardholders can access additional services and resources at various

libraries across Texas. Learn more about the TexShare program by visiting library.sulross.edu/find-and-borrow/texshare/ or ask a librarian by emailing srsulibrary@sulross.edu. Mike Fernandez, SRSU Librarian, is based in Eagle Pass (Building D-129) to offer specialized library services to students, faculty, and staff. Utilize free services such as InterLibrary Loan (ILL) and ScanIt to get materials delivered to you at home or via email.

Americans with Disabilities Act (ADA): 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. Students seeking accessibility/accommodations services must contact Mary Schwartze, LPC-S, SRSU's Accessibility Services Coordinator at 432-837-8203 (please leave a message and we'll get back to you as soon as we can during working hours), or email mary.schwartze@sulross.edu. Our office is located on the first floor of Ferguson Hall (Suite 112), and our mailing address is P.O. Box C-122, Sul Ross State University, Alpine, Texas, 79832.

Official Communication: All official communication by the University or me will be sent to your Sul Ross email account. As a result, you are required to activate your email account and check it from time to time for personal communication. I encourage you to email me if you have questions or comments, BUT PLEASE include your full name and the course for which you have questions. Even if you submit your email through the Blackboard site, I cannot tell which course you are in nor what your real name is (i.e., egar123) unless you put it in the body of your email.

Technical Support: The Support Desk is where you can direct your more technical questions. For example, the Support Desk can help you if you are having issues submitting a document, getting videos to play, or using BlackBoard. The support desk is open 24 hours a day/7 days a week for your convenience. You can reach the support desk by calling 888.837.8888 or by email blackboardsupport@sulross.edu. You may also reach the Support desk from the Technology Support tab within Blackboard by clicking the Support Desk graphic on the course homepage or calling 936.294.2780.

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

Assignments

Late Work is NOT ACCEPTED.

Course Requirements and Grading

Requirement	Points Possible	Grading Scale
Weekly Discussion Posts – Due Weekly	350 points	
Case 1- Due March 30, 2026	150 points	
Case 2 – Due April 13,2026	150 points	
Case 3 – Due April 27. 2026	150 points	
Final Exam	200 points	
		Your grade will be based on the following scale:
		A = 90 to 100%
		B = 80 to 89 %
		C = 70 to 79%
		D = 60 to 69%
		F = 59%
Possible Points	**1000 points**	

Course Assignments

Weekly Discussion Board:

1. Faculty will post a weekly discussion board that will be available at 12:01 AM Tuesday and have a due date of the following Monday at 11:59 PM.
2. Students will be required to respond to the question itself by Friday and reply to two other students by Sunday night.
3. The question will be designed to facilitate discussion by requiring students to offer their analysis, evaluation or design based on the courses weekly topic. (Blooms Levels 5-6).
4. The Instructor will be active in the Discussion Board by responding to at least half of the student posts each week.

Discussion Board Rubric: (50 points)

Rubric 1: The student's main post fully and substantially addressed all parts of the discussion question. (30 points).
Rubric 2: The Student's initial post was no later than Friday (5 points)
Rubric 3: The response was well-organized, clear, and free of grammatical and mechanical errors. (5 points).
Rubric 4: The student posts substantially to two other students. 5 points each (10 points)

Cases:

Three cases are assigned and are found in CONNECT. Please note that each case has two parts, one part requires completing a problem (75 points) and the second part is the written research assignment (75 points). Please see the schedule for the due dates.

Rubric for Written Research Assignment Part of Cases: (75 points)

Rubric 1: Written assignment part of the case was timely submitted. (15 points)
Rubric 2: Written assignment part of the case is organized, had good grammar and writing mechanics. (15 points)
Rubic 3: Written assignment part of the case had quality content and research. (30 points)
Rubric 4: Written assignment part of the case follows APA standards on formatting and structure. (15 points)

CASES WILL NOT BE ACCEPTED LATE.

Schedule for GBAA 5309 – 2nd Session, Spring 2026

Week 1 March 16 - 23	Chapters 1, 2, & 3	
Week 2 March 25 - 30	Chapters 4, 5, & 6 **Case 1 Due March 30, 2026**	
Week 3 March 31 – April 6	Chapters 7 & 8	
Week 4 April 7 - 13	Chapters 9 &10 **Case 2 Due April 13, 2026**	
Week 5 April 14 – 20	Chapter 11 & 12	
Week 6 April 21 - 27	Chapters 13 & 14 **Case 3 Due April 27, 2026**	
Week 7 April 28 - May 4	Chapters 15 & 16	
Week 8 May 4 - 5	**Final Exam Due May 5, 2026** (Grades due May 7 at Noon for graduating students)	

- **ASSIGNMENTS SUBJECT TO CHANGE**