BUSA 511: Business Analytics for Managers
Spring 2024

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Location: 2058, 8750 NorthPark Central

Office Hours: Monday, Tuesday & Thursday: 9 -11:30 AM (or by appointment).

COURSE INFORMATION

<u>Course Modality</u>

This course is designated as an ==online class==. All course materials and video recordings of the lectures will be available through D2L.

<u>Required Textbooks</u>

Business Analytics: Communicating with Numbers 2nd Edition
Author: Sanjiv Jaggia
ISBN: 1265909296

Alternative:

Business Analytics by Camm, Cochran, Fry, Ohlmann, Anderson, Sweeney & Williams
(ISBN-13: 9781337406420; ISBN-10: 1337406422)

COURSE DESCRIPTION

This course provides students an opportunity to understand the underlying framework of business analytics, the role of big data in today's dynamic organizational environment and using analytical models in business operations and decision making. Through a combination of lectures and business case studies, graduate students will learn how big data can support manager's decision making and how business analytics can be leveraged by organizations to gain a competitive advantage. The case studies explored will illustrate how companies take advantage of different sources of data with

different analytical techniques to improve performance, gain an understanding of optimizing results for better decisions, and employing analytical methods to translate data into key insights.

COURSE OBJECTIVES

By the end of this course, students will be able to:
- Learn how big data can support manager's decision making.
- Learn how business analytics can be leveraged by organizations to gain a competitive advantage.
- Learn how companies take advantage of different sources of data with different analytical techniques to improve performance and understand deeper concepts of business analytics.

COB SLO-Course Objective Alignment

COB STUDENT LEARNING OUTCOMES (SLOS)	COURSE OUTCOMES - AFTER SUCCESSFULLY COMPLETING THIS COURSE, STUDENTS WILL BE ABLE TO:	MEASUREMENT METHODS (OUTCOME ASSESSMENTS)
1, 2, 5	• Identify and describe complex business problems in terms of analytical models • Understand and apply statistical concepts and methods of business analytics • Develop models in excel and other analytical tools for various decisionmaking problems • Interpret results/solutions and identify appropriate courses of action for a given problem • Communicate technical information in the form of visualizations and detailed reports.	• Business Analytics Case Study and • Presentation Assignments

GRADING

At the end of this semester, if your total is between 90 and 100, you will get an A; if it's between 80 and 89, you will get a B, and so on. **Please note that the actual points will be used to calculate your final grade.** No curving will be used in this class.

Tasks	% of the final grade
Assignments	50
Quiz	10

Points	Grade
90-100	A
80-89	B
70-79	C
60-69	D
Below 60	F

Project	40

TECHNOLOGY REQUIREMENTS

You will need to use Microsoft office tools and Analytics Solver Add-In.

COMMUNICATION AND SUPPORT

If you ask me questions by emails, I will reply within 48 hours. However, I usually answer them much faster. **If you have questions about software operations, please make sure to include the screenshots of the issues in the emails.** All assignment due dates, deadlines, and exam time are central time in the United States.

COURSE AND UNIVERSITY POLICIES

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

Gee Library- Room 132
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
StudentDisabilityServices@tamuc.edu

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. (See Code of Student Conduct from Student Guide Handbook).

Campus Concealed Carry

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 ((http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProced ures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf) and/or consult your event organizer). Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&MCommerce campuses. Report violations to the University Police Department at 903-8865868 or 9-1-1.

STATEMENT ON AI USE IN COURSES [MAY 2023]:

Texas A&M University-Commerce acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors' guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

COURSE REQUIREMENTS

The course is AN ONLINE COURSE with Student Responsibilities or Tips for Success in the Course. You are responsible for reviewing all announcements within the course announcements pages, logging on at least 3 times a week, having and responding to all emails, and completing assignments on time, and attending or listening to recorded lectures early in the week. Failure to do these items will adversely affect your grade.

Examples include: Regularly logging into the course website, amount of weekly study and participation time expected, etc.

Please use these tips to be successful.

1. Get the textbook. The textbook will be part of all assignments and you will have to reference specific page numbers.
2. Review all the announcements. Check email daily for any feedback I will provide. However, the email will direct you to further information.
3. Please note due dates are generally Sundays but NOT during the final week.

I anticipate that we will follow the schedule I've outlined in this syllabus, but I may make an adjustment based on what actually happens in the course. I may also change the basis for the course grade (if I need to eliminate an assignment or something of that nature). If I do so, I will so inform you in writing. Remaining in the course after reading this syllabus will signal that you accept the possibility of changes and responsibility for being aware of them.

TENTATIVE COURSE OUTLINE

Week	Topics
1	Introduction to Business analytics
2	Data Management and Wrangling
3	Data Visualization using Excel
4	Advanced Data Visualization Power BI
5	Regression Analysis
6	Advanced topics in Regression Analysis (Qualitative, Interaction, Nonlinear)
7	Time Series Analysis
8	Advanced Topics in Time Series Analytics (Holts, Winters, ARIMA)
9	Spreadsheet Modeling (Data analysis Tool pack, Solver)
10	Montecarlo Simulation
11	Linear Programming
12	Qualitative Data Analysis
13	Advanced topics in Analytics and Data Ethics
14	Machine Learning – Overview
15	Machine Learning – Supervised Learning
16	Final Project Reports & Presentations

Quizzes will be assigned through MHConnect and the assignments will be posted on D2L.