Soochow University

MAG 390 Business Analytics

Winter 2024

Course Credits: 4
Contact Hours: 56 hours
Instructor: TBA
Email: TBA

COURSE OBJECTIVES

This course is designed to equip students with the essential skills and knowledge to harness data for informed decision-making in the business world. Business analytics combines statistical analysis, data mining, predictive modeling, and data visualization to extract valuable insights from data. Students will learn to use various tools and techniques to analyze data, make data-driven decisions, and gain a competitive edge in today's data-driven business landscape.

Upon Completion of this Course, students will be able to:

1. Understand the fundamentals of business analytics and its importance in decision-making;

2. Apply statistical and machine learning techniques to analyze data and make predictions;

3. Solve real-world business problems using data-driven approaches;

4. Ethically and responsibly handle data in a business context.

PREREQUISITES

None

GRADING

Grades will be determined by accumulating points, with 100 points being the maximum, as follows:

ITEM	POINTS

2 Assignments	20 Points
2 Quizzes	20 Points
Midterm Exam	25 Points
Final Exam	35 Points
Total	100 Points

Late submissions will be graded at the end of the course. Grades will be assigned according to the following rule:

A ≥ 90 > B ≥ 80 > C ≥ 70 > D ≥ 60 > F.

We reserve the right to make adjustments to the overall grading policy.

COURSE MATERIALS

Required Texts:

Albright, S. C. & Winston, W.L., ***Business Analytics: Data Analysis and Decision Making***, 7th Edition. Cengage Learning, 2020.

Recommended (Optional) Texts or Other Materials:

None

COURSE TOPICS

MODULE	TASKS
Module 1	**Topics:** Topic 1: Introduction to Business Analytics Topic 2: The Role of Data in Business Decision-Making Topic 3: Introduction to Business Analytics and its Applications Topic 4: Data Types and Data Sources **Assessments:** Assignment #1
Module 2	**Topics:** Topic 5: Probability and Probability Distributions Topic 6: Normal, Binomial, Poisson, and Exponential Distributions Topic 7: Decision Making under Uncertainty Topic 8: Statistical Inference **Assessments:** Quiz #1

Module 3	**Topics:** Topic 9: Data Collection Methods Topic 10: Data Cleaning and Preprocessing Topic 11: Exploratory Data Analysis Topic 12: Data Dashboards and Reporting Tools **Assessments:** Assignment #2 Midterm Exam
Module 4	**Topics:** Topic 13: Regression Analysis and Time Series Forecasting Topic 14: Optimization Modeling Topic 15: Simulation Modeling Topic 16: Data Mining **Assessments:** Quiz #2
Module 5	**Topics:** Topic 17: Importing Data into Excel Topic 18: Analysis of Variance and Experimental Design Topic 19: Data Privacy and Security Topic 20: Ethical Issues in Data Analysis **Assessments:** Final Exam

ATTENDANCE

1) Class attendance is required. Missing classes without permission will lead to decrease in overall grade.

Missing less than two classes: no penalty.

Missing more than two classes: 7% will be taken off from the overall grade.

If the instructor reports a student's frequent missing of class to the Soochow University Academic Administration Office, the student might get a written warning and might be prohibited from attending final exam.

2) Participants in this course are expected to arrive in class promptly and adequately prepared. The primary objective of this course is to critically engage with the readings and the subject matter. Therefore, course participants are expected to have completed the reading prior to class and prepare thoughtful reflections/commentaries to share with fellow colleagues.

LEARNING REQUIREMENTS

1) Late assignments are not acceptable and are subjected to grade deductions.

2) Assignments submitted in the wrong format will be counted as not submitted.

3) Failure to submit or fulfill any required course component results in failure of the class.

4) Make-up for midterm and final exams only with valid excuses, as defined by the University.

5) In order to earn a Certificate of Completion, participants must thoughtfully complete all assignments by stated deadlines and earn an average quiz score of 50% or greater.

TECHNOLOGY POLICY

The use of electronic devices in class is distracting, both for the user and for the rest of the class. Only non-programmable calculators can be used in the tests and exam. Any attempts to use cell phones and other electronic communication devices will be seemed as cheating. Laptops are discouraged, unless you use them for activities DIRECTLY related to the course (eg., note taking, reading course documents).

ACEDEMIC INTEGRITY POLICY

Soochow University highly values the academic integrity and aims to promote the academic fairness, honesty and responsibility. Any academic dishonesty behaviors and any attempts to cheats and plagiarism will be reported to the university administration office. A written warning and the relevant penalties will be imposed. The record might be shown on the official university transcript.

DISABILITY ACCOMMODATION

Soochow University is committed to maintaining a barrier-free environment so that students with disabilities can fully access programs, courses, services, and activities at Soochow University. Students with disabilities who require accommodations for access to and/or participation in this course are welcome.

Note:

Please contact the University Administrative Office immediately if you have a

learning disability, a medical issue, or any other type of problem that prevents professors from seeing you have learned the course material.