THE UNIVERSITY OF TEXAS AT EL PASO
Accounting and Information Systems Department

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CIS 4301 Business Intelligence & Decision Modeling, Fall 2022

> **IMPORTANT: This is a programming class. Students will be actively programming from the first week of class to the last. Students are expected to dedicate hours of study time outside of class.**

Class Hours: **3**:00 – 4:20 pm, MW, BUSN 311
Office Hours: TTR, 3:00 to 5:00pm, by appointment only
Textbook: Reading material will be announced during the semester as determined by Dr. Gonzales.

Course Software:
- IBM SPSS Modeler
- Excel
- SAS

Course Description: The focus of this course is on popular analytics models (predictive, optimization, prescriptive) used in different industries and functional areas. Students will learn how to formulate, solve, and interpret different optimization and simulation models. Decision modeling processes will be covered, which will enable students to translate practical decision problems into quantitative models; analyze the properties of decision models; apply appropriate decision models; execute models with software tools; and interpret the model outputs for intelligent decisions.

Course Instruction: This is a **hands-on class** where students will be working with relevant software from day one. While reading material is recommended, it is the responsibility of the student to research topics covered in class. Some course content may be conducted remotely and the professor reserves the right to change the course content and schedule.

Grade Components:

	Weight		Final Grade	Range
Practical Exams (3)	300		A	90% and up
Final Exam	100		B	80-89%
			C	70-79%
			D	60-69%
Total (400 points)	400		F	below 60%

Exams: All students are required to take the exams at the scheduled time which is to be announced in class. Makeup will only be given to students who have to miss due to "excused absences due to university-recognized activities" or under extreme circumstance. These students are required to send written notice to the instructor about the university-recognized activities ahead of time. See student handbook for a description of these activities.

Final Exam: Any student with a 'B' or better after the 3rd exam will not have to take the final.
Practical Exams and Project Grading: Professor will assign exam scores based on the following:
- Program execution without errors
- Program accomplishing objectives of assignment

CIS4330 Course Outline
(Professor reserves the right to change the course syllabus.)

Dates	Topic
08/22 08/24	- Course review and technology installation - Review of AI, Data Science, and Machine Learning
08/29 08/31	- SPSS Modeler Review – CRISP-DMS
09/05 09/07	- UTEP CLOSED – Labor Day - Examine Source Data Quality Using SQL - Sales
09/12 09/14	- Examine Source Data Quality Using SQL - Products - Extract Sales/Products Source Data and Exam Quality in SPSS
09/19 09/21	- Data Prep & Feature Engineering - Join Sales and Products
09/26 09/28	- Modeling – Sales and Products for Predictive Analysis
10/03 10/05	- Practical Exam #1 Review - SPSS Modeler - Practical Exam #1 – SPSS Modeler
10/10 10/12	- Text Mining and Natural Language Processing Use Case & Data Set
10/17 10/19	- Text Mining and Natural Language Processing Use Case & Data Set
10/24 10/26	- Practical Exam #2 Review - SPSS TM/NLP - Practical Exam #2 – SPSS TM/NLP
10/28	LAST DAY TO DROP
10/31 11/02	- Data Prep & Feature Engineering for Exploratory Analysis
11/07 11/09	- Data Prep & Feature Engineering for Exploratory Analysis
11/14 11/16	- Data Prep & Feature Engineering for Exploratory Analysis - Exploratory Algorithms
11/21 11/23	- Practical Exam #3 Review – SPSS Exploratory - Practical Exam #3 – SPSS Exploratory
11/28 11/30	- Course and Final Exam Review
DEC 12-05	**Comprehensive Final Exam**

Students with disabilities: If you feel you may have a disability that requires accommodations, contact the Disabled Student Services Office at 747-5148, go to the Union Bldg. East, room 106, or e-mail dss@utep.edu.

Academic integrity: The University of Texas at El Paso prides itself on its standards of academic excellence. In all matters of intellectual pursuit, UTEP faculty and students must strive to achieve excellence based on the quality of work produced by the individual. In the classroom and in all other academic activities, students are expected to uphold the highest standards of academic integrity. Any form of scholastic dishonesty is an affront to the pursuit of knowledge and jeopardizes the quality of the degree awarded to all graduates of UTEP. It is imperative, therefore, that the members of this academic community understand the regulations pertaining to academic integrity and that all faculty insist on adherence to these standards.

Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes, but is not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts. Proven violations of the detailed regulations, as printed in the Handbook of Operating Procedures (HOP), and available in the Office of the Dean of Students, and the homepage of The Dean of Students (DOS) at www.utep.edu, may result in sanctions ranging from disciplinary probation, to failing grade on the work in question, to a failing grade in the course, to suspension or dismissal, among others.