Course Title	Data Literacy and Statistics for Social Science and Business	Instructor(s)	Tunn Cho Lwin
		E-mail	
Class Style	Lecture and Discussion	Office Hours	
Track		Mode of Instruction	
Credits		Allocated Year	
Active Learning	2-(3) Presentations 4-(9) Group Work on Questions 3-(5) Symbolized Paraphrases and Summaries	Compulsory or Elective	
Course Overview	This course is designed to help students develop practical skills in understanding, interpreting, and communicating data in social science and business contexts. The course introduces fundamental ideas of data literacy through accessible examples, guided exercises, and applied activities. Students will learn how to identify different types of data, read tables and graphs, recognize patterns, compare groups, question misleading claims, and explain findings clearly. The course is structured to support step-by-step learning and emphasizes interpretation, critical thinking, and the responsible use of data in academic and practical settings.		
Course Objectives	Upon completion of this course, students will be able to: • demonstrate an understanding of how data is used in social science and business contexts. • interpret and communicate information presented in tables, graphs, and statistical summaries. • distinguish different types of data and apply appropriate ways to organize and describe them. • critically examine data sources, comparisons, and claims presented in social and business settings. • communicate data-informed ideas effectively through discussion, writing, and presentation.		
Prerequisite	None		

Course Schedule	No	Contents	Homework
	1	Introduction to Data Literacy and Statistical Thinking - Course guidance, meaning of data literacy, and the role of data in society, media, and business.	Confirm access to Excel
	2	Data Sources in Social Science and Business - Primary and secondary sources of data, and examples from surveys, reports, and organizations.	Exercise 1: Identify two examples of primary data and two examples of secondary data from real-life situations.
	3	Qualitative and Quantitative Data - Distinguishing qualitative and quantitative data using social science and business examples.	Exercise 2: Identify the qualitative and quantitative variables in the provided dataset.
	4	Levels of Measurement - Nominal, ordinal, interval, and ratio levels of measurement in practical contexts.	**Assignment 1**: Using the provided dataset, classify the variables by level of measurement and submit the task by e-mail.
	5	Discrete and Continuous Data - Understanding countable and measurable data, and how each type is represented and interpreted.	Exercise 3: Distinguish between discrete and continuous variables from a short list of examples.
	6	**Quiz 1**; Descriptive Statistics and Data Summaries	None

		- Mean, median, mode, and standard deviation as tools for summarizing data.	
	7	Reading Tables, Charts, and Graphs - Interpreting tables, bar charts, line graphs, pie charts, and other simple visual displays.	**Assignment 2**: Interpret one table, chart, or graph from example dataset and submit the task by email.
	8	Comparing Categorical and Numerical Data - Examining differences, patterns, and comparisons across groups using appropriate forms of data display and summary.	Exercise 4: Compare two groups in the example dataset and write a short explanation of the main difference.
	9	Data Transformation and Preparation - Reorganizing, grouping, recoding, and simplifying data to improve interpretation and presentation.	None
	10	**Quiz 2**; Patterns, Relationships, and Interpretation - Identifying patterns and interpreting simple relationships in data.	None
	11	Hidden Factors and Misleading Conclusions - Considering confounding influences, incomplete comparisons, and the importance of context in data interpretation.	**Assignment 3**: Apply a suitable data transformation technique to the provided dataset and submit the task by e-mail.
	12	Statistical and Practical Meaning - Distinguishing between numerical results and their practical meaning in social and business situations.	None
	13	Communicating Data and Storytelling - Presenting findings clearly, tailoring explanations to audience, and organizing data into meaningful messages.	**Assignment 4**: Interpret the hidden patterns or possible underlying factors in the provided data and submit the task by email.
	14	**Quiz 3**; Group Work Workshop and Review - Preparation and consultation for final group presentations.	Final Group Work preparation
	15	Final Group Presentation - Group presentation of a data interpretation project	None
Grading	**<u>Assessment</u>** Quizzes (3): 30% Assignments (4): 40% Final Group Presentation: 30% Each group will select or be assigned a dataset, report, chart, or statistical topic related to social science or business. The group will interpret the data, explain key findings, identify possible limitations or misleading points, and present their conclusions clearly in class.		
Textbooks	No fixed textbook. Handouts and instructor-prepared materials will be used in class.		
References	None		
NOTES	Regular attendance and punctuality are expected throughout the course. A respectful and cooperative attitude toward class activities and discussion is required. Electronic devices may be used only for learning purposes during class. In the case of absence, prior notice by e-mail is required whenever possible. Additional instructions will be provided as needed.		