Content

Course Code	Course Name	Semester	Theory	Practice	Lab	Credit	ECTS
CC316	Data Visualization and Storytelling	1	2	0	0	2	3

Prerequisites	
Admission Requirements	

Language of Instruction	English
Course Type	Elective
Course Level	Bachelor Degree
Objective	This course provides students with knowledge of visualizing and communicating insights from data. In this context, the objectives of the course are determined as follows: • Teach students how to transform data into compelling visuals and stories. • Empower students to derive actionable insights to inform decision-making. • Develop technical skills such as data cleansing, creating visualizations, and designing interactive dashboards. • Develop soft skills such as problem scoping, visual design, and communicating insights to empower decision-makers. • Distinguish between "showing data" and "telling stories" through case studies. • Provide practical experience with Tableau software and basic spreadsheet operations.
Content	Week 1 (Sep 16): Data, Information, Knowledge, and Storytelling • Week 2 (Sep 23): Establishing the Context: Defining the Problem Accurately and Target Audience Analysis • Week 3 (Sep 30): Case Studies: The Importance of Data Accuracy – Introduction to Tableau • Week 4 (Oct 7): Data Structuring – Exploratory Data Analysis I (Recognizing and Cleaning Data) – Tableau Classwork • Week 5 (Oct 14): Case Studies: Data Visualization and Storytelling • Week 6 (Oct 21): Seeing Patterns in Data – Exploratory Data Analysis II (Outliers and Relationships) – Tableau Classwork • Week 7 (Oct 28): Public Holiday (Eve of October 29 Republic Day) • Week 8 (Nov 4): Visual Presentation and Storytelling Formats I (Line and Area Charts – Heat Maps – Color Theory) – Tableau Classwork • Week 9 (Nov 11): Visual Presentation and Storytelling Formats II (Tree Maps – Visual Fallacies) – Tableau Classwork • Week 10 (Nov 18): Thinking Like a Designer: Faster and More Effective Visuals – Simple Design Principles • Week 11(Nov 25): Dashboard Design – Actions and Interaction – Tableau Classwork • Week 12 (Dec 2): Making Sense of Data: Critical Data Literacy and Interpretation • Week 13 (Dec 9): Case Studies: Data Visualization and Storytelling • Week 14 (Dec 16): Project Presentation of Data Visualization and Storytelling
References	• Knaflic, C. N. (2025). Storytelling with data: A data visualization guide for business professionals. John Wiley & Sons. • Tufte, E. R., & Graves-Morris, P. R. (1983). The visual display of quantitative information (Vol. 2, No. 9). Cheshire, CT: Graphics Press. • Cairo, A. (2016). The truthful art: Data, charts, and maps for communication. New Riders. • Tableau Software. < https://www.tableau.com/academic/students>

Theory Topics

Week	Weekly Contents
1	Data, Information, Knowledge, and Storytelling
2	Establishing the Context: Defining the Problem Accurately and Target Audience Analysis
3	Case Studies: The Importance of Data Accuracy – Introduction to Tableau
4	Data Structuring – Exploratory Data Analysis I (Recognizing and Cleaning Data) – Tableau Classwork
5	Case Studies: Data Visualization and Storytelling
6	Seeing Patterns in Data – Exploratory Data Analysis II (Outliers and Relationships) – Tableau Classwork
7	Public Holiday (Eve of October 29 Republic Day)
8	Visual Presentation and Storytelling Formats I (Line and Area Charts – Heat Maps – Color Theory) – Tableau Classwork

Week	Weekly Contents
9	Visual Presentation and Storytelling Formats II (Tree Maps – Visual Fallacies) – Tableau Classwork
10	Thinking Like a Designer: Faster and More Effective Visuals – Simple Design Principles
11	Dashboard Design – Actions and Interaction – Tableau Classwork
12	Making Sense of Data: Critical Data Literacy and Interpretation
13	Case Studies: Data Visualization and Storytelling
14	Project Presentation of Data Visualization and Storytelling