KINGDOM OF SAUDI ARABIA
IMAM MOHAMMAD IBN SAUD ISLAMIC UNIVERSITY
COLLEGE OF COMPUTER AND INFORMATION SCIENCES
INFORMATION SYSTEMS DEPARTMENT
MASTER OF SCIENCE IN INFORMATION SYSTEMS

المملكة العربية السعودية
جامعة الإمام محمد بن سعود الإسلامية
كلية علوم الحاسب والمعلومات
قسم نظم المعلومات
ماجستير العلوم في نظم المعلومات

SYLLABUS

Course Code: IS-6224 Course Name: Data Visualization

CREDIT HOURS	4

PREREQUISITE	None

Instructor:
Contact information and office hours
Office No: To be announced (TBA) **Office Hours: TBA** **E-mail: _____@imamu.edu.sa**

COURSE DESCRIPTION
Data visualization refers to the use of graphical and visual representations to communicate insights and patterns in data. It involves creating charts, graphs, and other visual aids to represent complex data sets in a way that is easy to understand and interpret. This course covers principles, techniques, and tools used to create effective visual representations of data. Students would learn how to use tools such as Tableau, Python, and R to create effective visualizations.

	COURSE LEARNING OUTCOMES (CLOs)	Aligned SOs
1	**Knowledge and Understanding**	
1.1	Understand the fundamental concepts of data visualization.	K1
1.2	Review state of art researches to comprehend popular data visualization tools.	K3
2	**Skills :**	
2.1	Perform research to identify gaps in existing and standard systems in the	S1

	field of data visualization.	
2.2	Utilize the appropriate technology to meet the organizational needs of data visualization.	S4
3	**Values:**	
3.1	Write course project reports abiding all ethical standards using leadership and management talents.	V2
3.2	Function effectively individually as well as on teams to accomplish a common goal.	V3

TEACHING Strategies
Class lectures, Assignment, Project explanation session.

No	List of Topics	Contact Hours	Self-Learning
1	Introduction to data visualization, principles and techniques.	*4*	
2	Data types and data preparation	*4*	
3	Visualization Tools	*4*	
4	Charting Techniques	*4*	
5	Color Theory, Design and Interactive visualizations	*4*	
6	Visual design principles	*4*	
7	Storytelling and Communication	*4*	
8	Geospatial and Time-Series Visualization	*4*	
9	Data-Driven Decision Making	*4*	
10	Data Ethics and Privacy	*2*	
11	Project Presentations	*2*	
Total		**40**	

TEXT BOOK
Data Visualization: A Handbook for Data Driven Design by Andy Kirk

REFERENCES
• Data Visualization Made Simple: Insights into Becoming Visual by Kristen Sosulski • Storytelling with Data: A Data Visualization Guide for Business Professionals" by Cole Nussbaumer Knaflic

	Course Assessment Methods		
No	**Assessment Method**	**Due Week**	**% of Total Assessment**
1	**Quizzes**	3	10
2	**Assignments**	5	10
3	**Midterm**	8	20
4	**Project**	10	20
5	**Final Exam**	11	40