



UNIVERSITI TEKNOLOGI MARA

DSC119: DATA VISUALIZATION AND INFORMATION REPORTING

Course Name (English)	DATA VISUALIZATION AND INFORMATION REPORTING APPROVED
Course Code	DSC119
MQF Credit	3
Course Description	This course intends to introduce concepts and practices behind effective data visualization and reporting. The course explores current data visualization that is analyzed for the content, methods and design strategies. The objective is to provide students with analytical tools that can benefit the design process of visualizing data and reporting knowledge behind the data.
Transferable Skills	Demonstrate ability to identify and articulate self skills, knowledge and understanding confidently in a variety of context.
Teaching Methodologies	Lectures, Lab Work
CLO	CLO1 Explain concepts and technique of data as well as their visualization for various contexts and representation CLO2 Display specific structural data visualization and reporting techniques for selected case studies CLO3 Demonstrate teamwork through project in data visualization and reporting
Pre-Requisite Courses	No course recommendations
Topics	
1. Introduction 1.1) Overview of Data 1.2) Overview of Data Visualization	
2. Methodology for Data Preparation 2.1) Defining Target Audience 2.2) Understanding Data Context 2.3) Data Acquisition and Preparation 2.4) Designing Interactive Dashboard	
3. Structure of Data Visualization 3.1) Hierarchical - Trees 3.2) Relational - Networks 3.3) Trends, Timelines and Flows 3.4) Spatial-temporal 3.5) Textual	
4. Reporting and Storytelling 4.1) Elements of Visual Design 4.2) Types of Storytelling 4.3) Storytelling in Design Process	
5. Current Issues in Data Visualization and Information Reporting 5.1) Case Studies	

Assessment Breakdown	%
Continuous Assessment	60.00%
Final Assessment	40.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	Assignment	20%	CLO2
	Group Project	Group Project	20%	CLO3
	Test	Test	20%	CLO1

Reading List	Recommended Text	<ul style="list-style-type: none"> • Knaflic, C. N. 2015, <i>Storytelling with Data: A Data Visualization Guide for Business Professionals</i>, John Wiley & Sons, Inc Hoboken, New Jersey [ISBN: 9781119002]
	Reference Book Resources	<ul style="list-style-type: none"> • Wilke, C. O 2019, <i>Fundamentals of Data Visualization: A Primer on Making Informative and Compelling Figures</i>, O'Reilly Media, Inc. Sebastopol, CA [ISBN: 9781492031086] • Evergreen, S. D. H 2019, <i>Effective Data Visualization: The Right Chart for the Right Data</i>, SAGE Publications Ltd Thousand Oaks, CA [ISBN: 9781544350882] • Thomas, W. M 2015, <i>Modeling Techniques in Predictive Analytics with Python and R: A Guide to Data Science</i>, Pearson Education Inc. Old Tappan, New Jersey [ISBN: 978013388655] • Britton, C 2016, <i>Designing the Requirements: Building Applications that the User Wants and Needs</i>, Addison-Wesley Professional USA [ISBN: 9780134021218]
Article/Paper List	This Course does not have any article/paper resources	
Other References	This Course does not have any other resources	