



UNIVERSITI TEKNOLOGI MARA

DSC651: DATA REPRESENTATION AND REPORTING TECHNIQUES

Course Name (English)	DATA REPRESENTATION AND REPORTING TECHNIQUES APPROVED
Course Code	DSC651
MQF Credit	3
Course Description	This course intends to introduce concepts and practices behind effective data representation and reporting techniques. The course explores current data representation 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 representing data and reporting information.
Transferable Skills	None
Teaching Methodologies	Lectures, Lab Work
CLO	CLO1 Explain information management and retrieval through data representation and reporting techniques CLO2 Design specific structural data representation and reporting techniques CLO3 Demonstrate good managerial skills through project in data representation and reporting techniques.
Pre-Requisite Courses	No course recommendations
Topics	
1. Introduction 1.1) 1.1 Overview of data 1.2) 1.2 Data Representation 1.3) 1.3 Purposes and contexts	
2. User Requirement and Perception 2.1) 2.1 Functional Requirements 2.2) 2.2 Non-Functional Requirements 2.3) 2.3 Designing Requirement 2.4) 2.4 The Relationship with The Users: Analyzing and reviewing context design 2.5) 2.5 Data acquisition and Preparation	
3. Structures of Data Presentation 3.1) 3.1 Hierarchical: Trees 3.2) 3.2 Relational: Networks 3.3) 3.3 Trend, Timelines and Flows 3.4) 3.4 Spatial-temporal 3.5) 3.5 Textual	
4. Reporting and Storytelling 4.1) 4.1 The importance of context 4.2) 4.2 Reproducible Reports 4.3) 4.3 Think like a designer 4.4) 4.4 Story telling construction and linking	
5. Current Issues in Data Representation and Reporting Techniques 5.1) 5.1 Interaction concepts and techniques 5.2) 5.2 Tools 5.3) 5.3 Case Studies	

Assessment Breakdown	%
Continuous Assessment	100.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	Assignment (3)	30%	CLO1
	Group Project	Group project (presentation, Analysis, Design, Development, Reporting)	40%	CLO3
	Test	Test 1	15%	CLO2
	Test	Test 2	15%	CLO2

Reading List	Recommended Text	<ul style="list-style-type: none"> Isabel Meirelles 2013, <i>Design for Information: An Introduction to the Histories, Theories, and Best Practices Behind Effective Information Visualizations</i>, Rockport Publishers [ISBN: 1610589483, 9]
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Article/Paper List	This Course does not have any article/paper resources
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Other References	<ul style="list-style-type: none"> • Book Scott Murray 2013, <i>Interactive data visualization for the Web</i> , O'Reilly Media, Inc. http://ISBN 1449340245. 9781449340247 • Book Tamara Munzner 2014, <i>Visualization Analysis and Design</i>, CRC Press http://ISBN 9781466508910 - CAT# K14708 • Book Alberto Cairo 2016, <i>The Functional Art: An introduction to information graphics and visualization</i> , New Riders http://doi.org/10.1080/17547075.2018.146 5704 • Book Thomas W. Miller 2015, <i>Modeling Techniques in Predictive Analytics with Python and R: A Guide to Data Science</i> , Pearson FT Press • Book Chris Britton 2015, <i>Designing the Requirements: Building Applications that the User Wants and Needs</i> , Addison-Wesley Professional http://ISBN: 9780134022949
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