

Liverpool John Moores University

Title: DATA VISUALISATION
Status: Definitive
Code: **5022DACOMP** (125366)
Version Start Date: 01-08-2021

Owning School/Faculty: Computer Science and Mathematics
Teaching School/Faculty: Computer Science and Mathematics

Team	Leader
William Hurst	Y

Academic Level: FHEQ5 **Credit Value:** 20 **Total Delivered Hours:** 55
Total Learning Hours: 200 **Private Study:** 145

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	22
Practical	33

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Artefacts	AS1	Data Visualisation	50	
Technology	AS2	Infographic Dashboard Development	50	

Aims

*To develop critical awareness of the effective presentation of results/data
To develop the skills to produce effective data presentations to highlight the unique properties of specific data sets*

Learning Outcomes

After completing the module the student should be able to:

- 1 Compare and contrast appropriate approaches to the presentation of data/results.
- 2 Appraise appropriate means for pre-processing data for presentation.

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Data Visualisation	2	
Infographic Dashboard Developm	1	2

Outline Syllabus

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Understanding visual perception

Limits of short-term memory

Visually encoding data for rapid perception

Gestalt principles of visual perception

Seven stages of the data visualisation process

Acquire

Parse

Filter

Mine

Represent

Refine

Interact

Chart Types

Time series

Mapping geographical data

Connections and correlations

Scatterplot Maps

Trees, Hierarchies and Recursion

Networks and Graphs

Design Guidelines

Interactivity

Highlighting

Filters

Hyperlinking

Sizing

Scrollbars

Fitting views

Information Dashboard Design

Infographics

Case studies in data visualisation

Learning Activities

Lectures will introduce the underpinning theories of data visualisation, while practical sessions will implement those theories in a practical manner. This module will have online practical.

Notes

This is a practical module that generates effective data visualizations rather than presenting static images, thus developing real hands-on experience of data visualisation.