MODULE DESCRIPTOR

Module Title

Data Visualisation

Reference	CM4125	Version	5
Created	September 2023	SCQF Level	SCQF 10
Approved	May 2020	SCQF Points	15
Amended	April 2024	ECTS Points	7.5

Aims of Module

To introduce, appraise and interpret data visualisation techniques, and understand the challenges associated with visualising large datasets.

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

1	Critique a variety of data visualisation techniques in terms of psychology, design, effectiveness and appeal to a wider audience.
2	Question data visualisations and explain what conclusions can be drawn from them in terms of data analysis.
3	Illustrate an understanding of the challenges of visualising large datasets.
4	Invent a coherent pictorial representation of numerical and categorical data.
5	Compose novel and interactive data visualisations which lucidly exhibit particular dataset features.

Indicative Module Content

1. Introduction to data visualisation 2. Tools for data visualisation 3. Data loading and preprocessing 4. Data cleaning 5. Designing graphs 6. Understanding and creating infographics 7. Visualising multiple variables 8. Data Dashboards

Module Delivery

Key concepts are introduced and illustrated through lectures, workshops and directed reading.

Indicative Student Workload	Full Time	Part Time
Contact Hours	30	N/A
Non-Contact Hours	120	N/A
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	N/A
Actual Placement hours for professional, statutory or regulatory body		

ASSESSMENT PLAN

If a major/minor model is used and box is ticked, % weightings below are indicative only.

Component 1

Type:	Coursework	Weighting:	100%	Outcomes Assessed:	1, 2, 3, 4, 5

Description:	A report describing how the student collected, analysed and processed a group of data sets, plus the creation of a data visualisation resource (i.e. a dashboard or an infographic).

MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

The calculation of the overall grade for this module is based on 100% weighting of C1. An overall minimum grade D is required to pass the module.

Module Grade	Minimum Requirements to achieve Module Grade:
A	The student needs to achieve an A in C1
B	The student needs to achieve a B in C1
C	The student needs to achieve a C in C1
D	The student needs to achieve a D in C1
E	The student needs to achieve an E in C1
F	The student needs to achieve an F in C1
NS	Non-submission of work by published deadline or non-attendance for examination

Module Requirements

Prerequisites for Module	None.
Corequisites for module	None.
Precluded Modules	None.

INDICATIVE BIBLIOGRAPHY

1 McCandless, D. 2014. Knowledge is Beautiful. 1st Ed. Williams Collins.

2 Cairo, A. 2016. The Truthful Art. 1st Ed. Pearson.

3 McCandless, D. 2013. Information is Beautiful. 1st Ed. Collins.

4 Microsoft Power BI Community https://community.powerbi.com/t5/Themes-Gallery/bd-p/ThemesGallery

5 Korchia, N, and Voignier, F. From Hadoop to the Cloud: How to simply Modernize Analytics Applications? https://indexima.com/portfolio/webinar-oneclick-aws/?cid=5c7bf3cce317a76bb3191a42&utm_medium=email&utm_campaign=5e9864e4eeec3720896ef66d&utm_source=plezi-smart-campaign

6 Tableau Certified Associate Exam Guide https://www.udemy.com/course/tableau-certified-associate-exam-guide/

7 Power BI A-Z: Hands-On Power BI Training for Data Science! https://www.udemy.com/course/mspowerbi/

8 Plotly, Dash App Gallery https://dash-gallery.plotly.host/Portal/