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MODULE DESCRIPTOR

Module Title

Data Visualisation

Reference	CM4125	Version	1
Created	February 2020	SCQF Level	SCQF 10
Approved	May 2020	SCQF Points	15
Amended		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 Critically appraise a variety of data visualisation techniques in terms of psychology, design, effectiveness and appeal to a wider audience.
- 2 Interpret data visualisations and explain what conclusions can be drawn from them in terms of data analysis.
- 3 Understand the challenges of visualising large datasets.
- 4 Translate numerical and categorical data into coherent pictorial representations.
- 5 Create novel and interactive data visualisations which lucidly exhibit particular dataset features using publicly available data.

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	36	N/A
Non-Contact Hours	114	N/A
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	N/A
<i>Actual Placement hours for professional, statutory or regulatory body</i>		

ASSESSMENT PLAN

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

Component 1

Type: Coursework Weighting: 50% Outcomes Assessed: 1, 2, 3

Description: Critically analyse an existing dataset including selection and preprocessing for visualisation purposes worth 50% of overall module grade.

Component 2

Type: Coursework Weighting: 50% Outcomes Assessed: 4, 5

Description: Create a data visualisation worth 50% of the overall module grade.

MODULE PERFORMANCE DESCRIPTOR**Explanatory Text**

The calculation of the overall grade for this module is based on a 50% weighting for C1 and 50% weighting for C2. An overall minimum grade D is required to pass the module.

		Coursework:						
		A	B	C	D	E	F	NS
Coursework:	A	A	A	B	B	C	E	
	B	A	B	B	C	C	E	
	C	B	B	C	C	D	E	
	D	B	C	C	D	D	E	
	E	C	C	D	D	E	E	
	F	E	E	E	E	E	F	
	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/>