

MODULE DESCRIPTOR

Module Title

Perception And Visualisation

Reference	CM3120	Version	1
Created	April 2017	SCQF Level	SCQF 9
Approved	August 2017	SCQF Points	15
Amended		ECTS Points	7.5

Aims of Module

To provide the student with the ability to demonstrate a critical understanding of the fundamental concepts of information visualisation and apply this knowledge to practical data visualisation problems in computing and digital media.

Learning Outcomes for Module

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

- 1 Explain the fundamental ideas of visual perception and how these concepts impact on the design and display of information sources.
- 2 Compare and contrast the advantages and disadvantages of using different visualisation methods to display a range of information types.
- 3 Analyse and enhance examples of existing information visualisations.
- 4 Create interactive data visualisations using modern web technologies.
- 5 Describe the accessibility issues associated with different information visualisation methods.

Indicative Module Content

Perception theory; Mapping data to visual representations; Cognitive processes in visualisation; Lightness, brightness, contrast, and colour; Texture. Visual attention; Layering and Separation; Images, data and words. Data-Driven-Development Web Practice; API interaction; Multi-dimensional data visualisation. Application to accessibility issues.

Module Delivery

The module is taught using a combined lecture and lab method. Theoretical concepts are delivered through lecture material, giving students the opportunity to learn about concepts that are core to understanding the methods that exist within perception and visualisation. Lab material focuses on the development of skills to enable students to create interactive visualisations from pre-existing datasets. This mix creates a blend of creative visualisation techniques underpinned by perception theory.

Indicative Student Workload

	Full Time	Part Time
Contact Hours	33	N/A
Non-Contact Hours	117	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: 100% Outcomes Assessed: 1, 2, 3, 4, 5

Description: Component 1 - This is a coursework worth 100% of the total module assessment.

MODULE PERFORMANCE DESCRIPTOR**Explanatory Text**

The calculation of the overall grade for this module is based on 100% weighing 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 WARE,C.,2013.Information Visualization: Perception for Design. 3rd ed. 3rd ed. Morgan Kaufmann.
- 2 TUFTE, E., 2001. The Visual Display of Quantitative Information. 2nd ed. USA: Graphics Press.
- 3 TUFTE, E., 1990. Envisioning Information. USA: Graphics Press.
- 4 TUFTE, E., 1997. Visual Explanations. USA: Graphics Press.
- 5 TUFTE, E., 2006. Beautiful Evidence. USA. Graphics Press.