

Data Visualisation Course Descriptor

Course Title	Data Visualisation	Faculty	EDGE Innovation Unit (London)
Course code	NCHNAP557	Course Leader	Professor Scott Wildman (interim)
Credit points	15	Teaching Period	This course will typically be delivered over a 6-week period.
FHEQ level	5	Date approved	June 2020
Compulsory/ Optional	Compulsory		
Pre-requisites	None		
Co-requisites	None		

COURSE SUMMARY

This course introduces the use of design, interaction, and visualisation techniques and strategies to support the effective presentation and manipulation of business information. Based on principles from art, design, psychology, and information science. It offers learners opportunities to learn how to successfully choose appropriate methods of representing various kinds of business data to support analysis, decision making, and communication to organizational stakeholders. Learners will have the opportunity to apply their knowledge of data visualisation using industry-standard cloud-based technology e.g. using ServiceNow training.

COURSE AIMS

- Train learners to quickly summarise, compare, understand and interpret data using visualisation methods.
- For learners to explore data visualisation methods and how graphics can be created using bespoke algorithms and standard software packages.
- Train learners to balance data analysis with design skills in order to create visuals that stimulate viewer attention and engagement.

LEARNING OUTCOMES

On successful completion of the course, learners will be able to:

KNOWLEDGE AND UNDERSTANDING

- K1b Have the knowledge and critical understanding of the pros and cons of visualisation methods such as graphs, heat maps, Gantt charts, scatter graphs, dashboards, networks and radial trees etc.
- K2b Have a critical understanding of data presentation strategies and how to balance data analysis with visual storytelling.

SUBJECT SPECIFIC SKILLS

- S1b Effectively use data visualisation algorithms and software, such as Excel, Tableau and Python (Matplotlib).
- S2b select and apply appropriate visual design practice for effective communication with specialist and non-specialist audiences.

TRANSFERABLE AND PROFESSIONAL SKILLS

- T1bi Develop logical analysis and conceptual thinking.
- T1bii Demonstrate an effective technical proficiency of written English that uses a wide range of literacy skills and vocabulary selected appropriately to communicate to specialist and non-specialist audiences.
- T2b Critically evaluate the appropriateness of different strategies to problem solving within this field of study.
- T3b Effectively communicate arguments, analyses and conclusions.

TEACHING AND LEARNING

This is an e-learning course, taught throughout the year.

This course can be offered as a standalone short course.

Teaching and learning strategies for this course will include:

- On-line learning
- On-line discussion groups
- On-line assessment

Course information and supplementary materials will be available on the College's Virtual Learning Environment (VLE).

Learners are required to attend and participate in all the formal and timetabled sessions for this course. Learners are also expected to manage their self-directed learning and independent study in support of the course.

The course learning and teaching hours will be structured as follows:

- Off-the-job learning and teaching (6 days x 7 hours) = 42 hours
- On-the-job learning (12 days x 7 hours) = 84 hours (e.g. 2 days per week for 6 weeks)
- Private study (4 hours per week) = 24 hours

Total = 150 hours

Workplace assignments (see below) will be completed as part of on-the-job learning.

ASSESSMENT

FORMATIVE

Learners will be formatively assessed during the course by means of set assignments. These will not count towards the final degree but will provide learners with developmental feedback.

SUMMATIVE

Assessment will be in two forms:

AE	Assessment Type	Weighting	Online submission	Duration	Length
1	Practical skills assessment (workplace dataset)	70%	Yes	Requiring on average 25-35 hours to complete	
2	Written Assignment(workplace case study)	30%	Yes	Requiring on average 10-15 hours to complete	1,500 words +/- 10%, excluding data tables

FEEDBACK

Learners will receive formal feedback in a variety of ways: written (via email or VLE correspondence) and indirectly through online discussion groups. Learners will also attend a formal meeting with their Academic Mentor (and for apprentices, including their Line Manager). These bi- or tri-partite reviews will monitor and evaluate the learner's progress.

Feedback is provided on summatively assessed assignments and through generic internal examiners' reports, both of which are posted on the VLE.

INDICATIVE READING

Note: Comprehensive and current reading lists for courses are produced annually in the Course Syllabus or other documentation provided to learners; the indicative reading list provided below is used as part of the approval/modification process only.

BOOKS

- Tufte, E., (2001), *The Visual display of quantitative information*, Cheshire, Conn.: Graphics Press
- Few, S., (2012), *Show me the numbers: Designing tables and graphs to enlighten*, Burlingame, Calif.: Analytics

JOURNALS

Learners are encouraged to consult relevant journals on data visualisation.

ELECTRONIC RESOURCES

Learners are encouraged to consult relevant electronic resources on data visualisation.

INDICATIVE TOPICS

- Evaluation of data visualisation methods for effective communication to specialist and non-specialist audiences
- Practical use of data visualisation methods
- Building bespoke algorithms for data analyses and visualisation

Title: NCHNAP557 Data Visualisation					
Approved by: Academic Board					
Location: Academic Handbook/Programme specifications and Handbooks/ Undergraduate Apprenticeship Programmes/BSc (Hons) Digital & Technology Solutions Programme Specification/Course Descriptors					
Version number	Date approved	Date published	Owner	Proposed next review date	Modification (As per AQF4) & category number
2.1	May 2022	May 2022	Scott Wildman	June 2025	Category 1: Corrections/clarifications to documents which do not change approved content.
2.0	January 2022	April 2022	Scott Wildman	June 2025	Category 3: Changes to Learning Outcomes
1.0	June 2020	June 2020	Scott Wildman	June 2025	