



## Data Analytics Fundamentals Course Descriptor

Course Title	Data Analytics Fundamentals	Faculty	EDGE Innovation Unit (London)
Course code	NCHMV464	Course Leader	Marta Rodriguez-Martinez
Credit points	30	Teaching Period	12 weeks
FHEQ level	4	Date approved	March 2021
Compulsory/Optional	Compulsory		
Prerequisites	None		
Co-requisites	None		

### COURSE SUMMARY

In this course, learners will study the basics of data analytics and learn how to use three common tools: a spreadsheet software, standard query language (SQL), and an interactive data visualization software. The spreadsheet software will enable the learners to undertake data cleaning and exploratory data analysis to help generate insights. Learners will use SQL to extract information from a relational database management system (RDBMS) by writing increasingly complex queries, including filtering, aggregation, aliasing and subqueries. Finally, learners will use a data visualization software to perform further exploratory data analysis using a wide range of visualisation techniques. With the skills developed in this course, learners will understand how to build a dashboard and demonstrate how it creates added value within the business.

### COURSE AIMS

- Train learners to use common data analysis tools to perform data cleaning, analysis, and generate insight.
- Train learners to query a relational database using SQL.
- Train learners to use effective data visualization techniques and understand their applicability in presenting insight.

## LEARNING OUTCOMES

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

### KNOWLEDGE AND UNDERSTANDING

- K1a Utilise common methods to migrate data (for subsequent analysis) from two different sources and articulate data conversion requirements.
- K2a Demonstrate the use of storytelling with data through data visualisation.
- K3a Formulate an analytics report using different software including spreadsheet and data visualization software.

### SUBJECT SPECIFIC SKILLS

- S1a Apply array indexing operations and create summary statistics tables to generate insight.
- S2a Explain and implement the necessary steps involved in the data cleaning process.
- S3a Apply different data mining tools to large datasets to uncover trends and patterns.

### TRANSFERABLE AND PROFESSIONAL SKILLS

- T1a Deliver an oral presentation of analytical findings.
- T2a Apply analytical skills to achieve a required outcome.
- T3a Present findings using effective visual aids.

## TEACHING AND LEARNING

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

- Seminar = 30 hours
- Applied Seminar = 15 hours
- Coaching session = 2 hours
- Academic Drop-ins = 8 hours
- Reading and Assessment Prep = 65 hours
- Application of learning = 180hours

Total = 300 hours

## ASSESSMENT

### FORMATIVE

Learners will be formatively assessed during the course through a range of techniques. During Seminars, applied learning seminars and one to one coaching, questioning and quizzing are used as formative assessment. The purpose of the formative assessment is to provide learners with developmental feedback to support their learning.

**SUMMATIVE**

AE	Assessment Type	Weighting	Online submission	Duration	Length
1	Set exercise	30%	Yes	Requiring on average 5-15 hours to complete	1500 +/- 10%
2	Set exercise	50%	Yes	Requiring on average 15-25 hours to complete	2000 +/- 10%
3	Oral	20%	No	30 min +/- 10%	

The summative assessment will be assessed in accordance with the assessment aims set out in the Programme Specification.

**FEEDBACK**

Learners will receive formal feedback in a variety of ways. For summative assessments, feedback is written and provided within 20 days of submission, and for formative assessment it could include verbal or written feedback. Learners will also have a progress review each quarter, see above, with their Multiverse Coach and their Line Manager. These reviews are an opportunity to discuss progress to date both in their role and on the degree programme.

**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**

Malik, U., Goldwasser, M. and Johnston, B., 2019. *SQL for Data Analytics: Perform fast and efficient data analysis with the power of SQL*. Packt Publishing Ltd.

Winston, W., 2019. *Microsoft Excel 2019 Data Analysis and Business Modeling: Data Analysis and Business Modeling*. Pearson Education.

Berinato, S., 2019. *The Harvard Business Review Good Charts Collection: Tips, Tools, and Exercises for Creating Powerful Data Visualizations*. Harvard Business Press.

**INDICATIVE TOPICS**

Learners will study the following topics:

- Use of spreadsheet software for data analysis
- Use of SQL to retrieve data from a RDBMS
- Data visualisation techniques
- Introduction to interactive data visualization software

<b>Title: NCHMV464 Data Analytics Course Descriptor</b>					
<b>Approved by: Academic Board</b>					
Version number	Date approved	Date published	Owner	Location	Proposed next review date
1.0	March 2021	March 2021	Marta Rodriguez-Martinez	Multiverse website	March 2026
<b>Modifications (As per AQF4)</b>					
Version number	Date approved	Date published	Modification (including category number)		