Data management and analysis TM351

Presentation pattern *October to June*

Module description

This module will provide students with a practical, legal and ethical understanding of how to access, query, manage and explore data collections, using traditional relational databases and contemporary NoSQL approaches. Using real-world datasets, standard software packages, data visualisation techniques and summarising data views, students will learn how to explore data collections in order to answer questions about the world and develop an appreciation of user needs surrounding data systems.

Person specification

The person specification for this module should be read in conjunction with the generic person specification for an associate lecturer at The Open University.

As well as meeting all the requirements set out in the generic person specification, you should have:

- have a relevant degree or equivalent experience in working with and/or managing data
- have a theoretical and/or management background underpinning an understanding of a variety of data management and analysis technologies and techniques such as relational and NoSQL databases, particularly MongoDB, mapreduce, and data visualisation techniques, gained by either academic or practical experience
- *either* be able to program in the Python programming language *or* be able to program in another imperative programming language or language used for data exploration and analysis, such as R, and be willing to learn Python
- be familiar with the legal and ethical issues surrounding data collection, management and analysis
- be able to support students in the practical aspects of the module, including the use of virtual machines and writing Python code to analyse previously unseen datasets
- be enthusiastic and knowledgeable about data science as a key skill for the 21st century.

Additional information

- In addition to marking two tutor-marked assignments (TMAs) and an end-of-module assessment (EMA), which are significantly report based, you will also have to actively monitor student engagement on several interactive computer-marked assignments (iCMAs) and respond to student queries about the iCMAs.

Module related details - a full explanation can be found on the website

Credits awarded to the student for the successful completion of a module:	30
Number of assignments submitted by the student:	2
Method of submission for assignments:	2
Level of ICT requirements:	2
Number of students likely to be in a standard group:	20
Salary band:	3
Estimated number of hours per teaching week:	3.5