Module Details

Module Title:	Fundamentals of Artificial Intelligence and Data Analytics
Module Code:	OIM4012-B
Academic Year:	2019-20
Credit Rating:	20
School:	School of Management
Subject Area:	Operations and Information Management
FHEQ Level:	FHEQ Level 4
Pre-requisites:	
Co-requisites:	

Contact Hours

Type	Hours
Lectures	12
Seminar	18
Laboratory	12
Directed Study	158

Availability

Occurrence	Location / Period
BDA	University of Bradford / Academic Year (Sept - May)

Module Aims

This module introduces you to the concepts of Artificial Intelligence (AI) and Data Analytics and how they can be applied to improve organisational performance and generate competitive advantage. It will provide you with opportunities to critically reflect on the significance of AI and Data Analytics within the workplace. The module will deepen your understanding of key AI and Data Analytics techniques, tools and methods currently being used by organisations. You will become familiar with the societal impact of AI and the ethical dilemmas this creates, enabling you to develop your own ethical stance on the use of AI. You will also develop an awareness of, and skills in using fundamental data analysis techniques that are utilised in AI systems.

Outline Syllabus

·   An Introduction to AI and Data Analytics in the 21st Century
·   The Opportunities and Challenges of AI and Data Analytics for organisations and society.
·   The origins and development of AI and Data Analytics
·   The relationship between Data Analytics and AI.
·   The fundamentals of Data Analytics
·   Basic AI methods and tools – e.g. Machine Learning, Neural Networks
·   Real-world applications of AI – e.g. Healthcare, Manufacturing, Engineering, Social care
·   Ethical Data Handling
·   The ethical dilemmas of AI
·   The future of AI

Learning Outcomes

1	You will be able to understand the basic concepts of AI and Data Analytics its importance within organisations and its impact upon society.
2	You will be able to identify and critically evaluate the application of AI and Data Analytics within organisations
3	You will understand the fundamentals of data analytics that underpin many AI applications and have the practical skills to manipulate and interrogate rich data sets.
4	You will be able to critically discuss the positive and negative impacts of AI and Data Analytics for organisations, society and the individual.

Learning, Teaching and Assessment Strategy

Learning will be directed, supported and reinforced through technology enhanced learning, online collaboration such as online discussion boards and multimedia and a combination of creative seminars, computer workshops, lectures, and directed and self-directed study.

Formative assessment will be provided throughout the course through on-line discussion and within seminars, tutorials and workshops. The assessments will assess against learning outcomes as follows;

LO1, LO2 and LO4 will be assessed through the Creative Group Presentation (Assessment 1)

LO1, LO2, LO3, LO4 will be assessed through the Critical Evaluation Coursework (Assessment 2)

Appropriate feedback will be given for both elements of the assessment in accordance to the faculty required standards. The coursework assessment and group presentation and their weighting is described in the mode of assessment section below.

Mode of Assessment

Type	Method	Description	Length	Weighting

Summative	Presentation	Creative Group Presentation; Supplementary will take the form of an individual digital presentation.	15 minutes	30%
Formative	Coursework	Feedback provision during seminars and practical workshops		%
Summative	Coursework	A Critical Evaluation of Artificial Intelligence and Data Analytics	2500 words	70%

Reading List

To access the reading list for this module, please visit https://bradford.rl.talis.com/index.html.

Please note:

This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.