WM9A9-15 Big Data, Analytics & Optimisation

24/25

Department
> WMG

Level
> Taught Postgraduate Level

Module leader
> Liping Zheng

Credit value
> 15

Module duration
> 4 weeks

Assessment
> 100% coursework

Study locations
> University of Warwick main campus, Coventry Primary
> Distance or Online Delivery

Description

Introductory description

Advanced eCommerce and Digital Analytics involves the utilisation of many of the newer, and more sophisticated technologies and techniques for optimising digital assets and business processes. This module introduces some of the most important of these, and gives participants practical experience of their uses

Module aims

The module aims to expose students to the latest in technical eCommerce practice and provide a toolkit for the implementation and optimisation of digital platforms and strategies. This incorporates technological developments, strategy and management, as well as analytical methods to derive insights from data at scale (which is common to modern digital platforms). Participants will get the opportunity to develop hands-on experience with the latest technology, within a modern cloud environment, to critically analyse a range of business scenarios, and implement sophisticated big data and digital analytics solutions

Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

1. eCommerce optimisation

- Web crawling, API
  -T echnical SEO (web optimisation)
- Customer segmentation

1. Big data

- Big data fundamentals
- Cloud computing
- NoSQL databases and data lakes
- Data warehouse and SQL
- Artificial intelligence and machine learning
- Natural language processing
- Unstructured data analysis

1. Data visualisation
   -Best practice of data visualisation

- Dashboards

1. A practical simulation of the above topics

Learning outcomes

By the end of the module, students should be able to:

- Demonstrate a comprehensive understanding of the key differences between Big Data technologies and analysis methods and traditional approaches.
- Evaluate real-world scenarios and devise appropriate analytical solutions.
- Demonstrate a comprehensive understanding of the core concepts of visual communication and data visualisation.
- Collaboratively analyse digital business requirements and practically implement analytics and optimistaion techniques in real-world settings

Indicative reading list

[View reading list on Talis Aspire](#)

Interdisciplinary

A mixture of technology/computing topics and business topics

International

Topics are of high international demand

Subject specific skills

Big data, analytics, visualisation, technical SEO, AI, machine learning, NLP

Transferable skills

Programming, statistics and modelling, team work, critical analysis

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Study

Study time

Type	Required
Lectures	20 sessions of 1 hour (13%)
Seminars	10 sessions of 1 hour (7%)
Online learning (independent)	60 sessions of 1 hour (40%)
Assessment	60 hours (40%)
Total	150 hours

Private study description

No private study requirements defined for this module.

Costs

No further costs have been identified for this module.

Assessment

You must pass all assessment components to pass the module.

Assessment group A3

	Weighting	Study time	Eligible for self-certification
Assessment component			
Big Data Analytics Presentation	30%	18 hours	No
A presentation of analyses of various datasets and recommendations on business actions from them. Peer Marking Process will be adopted in this assessment			
Reassessment component			
Big Data Analytics Presentation			Yes (extension)
A presentation of analyses of various datasets and recommendations on business actions from them			
Assessment component			
Assignment	70%	42 hours	Yes (extension)
A business-style report discussing core topics in big data, optimisation and visualisation			
Reassessment component is the same			

Feedback on assessment

Verbal feedback will be provided for the group assessment. Written feedback will be provided for the individual assignment.

Availability

There is currently no information about the courses for which this module is core or optional.