

WM9A9-15 Big Data, Analytics & Optimisation

21/22

Department

WMG

Level

Taught Postgraduate Level

Module leader

Liping Zheng

Credit value

15

Module duration

2 weeks

Assessment

Multiple

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

- Google analytics
- Multivariate testing
- Technical SEO
- Personalisation
- Chatbots

1. Big data

- Big data fundamentals
- NoSQL databases and data lakes
- Internet of Things
- Artificial intelligence and machine learning

1. Social media analytics

- Natural language processing
- Social network analysis
- Sentiment analysis
- Topic models
- Image processing

1. Data visualisation

- Interactive 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.
- Practically implement analytics and optimisation 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, multivariate testing, technical SEO, social media analytics

Transferable skills

Programming, statistics and modelling, team work, critical analysis

Study

Study time

Type	Required
Lectures	14 sessions of 1 hour 30 minutes (14%)
Seminars	4 sessions of 1 hour 30 minutes (4%)
Supervised practical classes	12 sessions of 1 hour 30 minutes (12%)
Assessment	105 hours (70%)
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 do not need to pass all assessment components to pass the module.

Assessment group A

	Weighting	Study time	Eligible for self-certification
Big Data Analytics Presentation	20%	15 hours	No
A presentation of analyses of various datasets and recommendations on business actions from them			
Post Module Assignment	80%	90 hours	Yes (extension)
A business-style report discussing core topics in big data and eCommerce optimisation			

Assessment group R

	Weighting	Study time	Eligible for self-certification
Post Module Assignment	100%		Yes (extension)
A business-style report discussing core topics in big data and eCommerce optimisation			

Feedback on assessment

Verbal feedback for in-module element. Written feedback and annotated scripts for post-module element

Availability

Courses

This module is Optional for:

- Year 1 of TWMS-H1S4 Postgraduate Taught e-Business Management (Full-time)