# WM9A9-15 Big Data, Analytics & Optimisation

## 23/24

**Department**
    WMG
**Level**
    Taught Postgraduate Level
**Module leader**
    Liping Zheng
**Credit value**
    15
**Module duration**
    4 weeks
**Assessment**
    Multiple
**Study locations**
    University of Warwick main campus, Coventry Primary
    Distance or Online Delivery

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## 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 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, multivariate testing, technical SEO, social media analytics

**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%) |
| Supervised practical classes | (0%) |
| 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.

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## Assessment

You do not need to pass all assessment components to pass the module.

### Assessment group A2

| | Weighting | Study time |
| --- | --- | --- |
| Big Data Analytics Presentation | 10% | 5 hours |

|  | Weighting | Study time |
|---|---|---|
| A presentation of analyses of various datasets and recommendations on business actions from them | | |
| Assignment | 70% | 45 hours |
| A business-style report discussing core topics in big data and eCommerce optimisation | | |
| Report (800 words) | 20% | 10 hours |
| Data Analysis & Visualisation | | |

## Assessment group R2

|  | Weighting | Study time |
|---|---|---|
| Assignment | 100% | |
| 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

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# Availability

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