

Module code	DSB703	Level	7
Module title	Tools for Data Analysis	Credit value	10
Programme(s) on which the module is taught	MSc Data Science in Business	ECTS Credits	5
		Notional learning hours	100

1. Pre-requisite modules

None

2. Module aims

Sophisticated analytics tools are needed to visualise and analyse today's increasing quantities of business-focused data. This module will provide you with a general understanding of the current tools and applications of data analytics in marketing, finance and management contexts. You will gain a foundation knowledge into the discipline of data analysis through these tool-based perspectives: core analytics and business intelligence; web analytics and competitor analysis tools; and social media analytics.

The aim of this module is to provide you with business-focused knowledge of the broad field of data analytics deployment and an appreciation of skill sets on which these deployments are dependent in a business context.

3. Learning outcomes

Upon successful completion of this module, you will be able to:

- LO1: Understand and critically reflect on the role of the analyst based on a systematic understanding and knowledge of data and analytics.
- LO 2: Analyse and critically evaluate complex situations to solve problems, using data.
- LO 3: Use the tools and approaches of data analytics to gain valuable insights into consumer behaviour to drive strategy
- LO 9: Negotiate the ethical, legal and regulatory dimensions of data analysis, to deliver sustainable outcomes.

4. What you will do on the module

You will gain a broad appreciation of the ecosystem of business-oriented data analytics. The focus is both conceptual and practical; you will be expected to experience a range of data analytics tools in applied sense, that is, via hand-on exploration. Examples of such tools are Excel, Power BI, Python, Google Analytics, and Brandwatch, but the specific selection covered in this module could change from year to year. You will experience how these tools can be used to address the various and changing needs of modern organisations.

5. Learning and teaching methods

The following learning and teaching methods are employed on this module:

- Seminar/Lab sessions
- Self-directed online exercises
- Case study group work
- Discussion forums
- Guest speakers

The notional learning hours for this module are:

10 credit module – 100 learning hours	
Directed learning	33 hours
Workshops / classes	33
Collaborative Learning	5 hours
Asynchronous interaction	5
Self-directed learning	62 hours
Self-Directed learning (pre & post class)	31
Preparation for assessment, response to feedback and summative assessment	31
Total	100 hours

6. Assessment, formative feedback and relative weightings

The assessment strategy for this module comprises both formative and summative assessment.

Summative Assessment 1: Analytics Tools Report, 2000 words (+/- 10%) (40% TMM)

Working as group, you will assess the current state of data analytics platforms categorised in by their type. Examples of this type are GUI-fronted core platforms, business intelligence-focused platforms, open-source programming languages, web analytics, and social media analytics platforms. You should assess these tools through criteria of your own choosing. Example criteria are analytical capability, visualisation, ease of use (to name only a few). You should make use of industry and academic sources, where appropriate.

Formative work for Assessment 1

Prior to this summative submission, you will present a sketch draft of the report. This should highlight the overall structure, a brief overview of the chosen tools, and any provisional findings you may have generated. This work will be reviewed, and feedback given.

Summative Assessment 2: Consultancy Report, 2500 words (+/- 10%) (60% TMM)

Working individually, you will be provided with a case study of a company, comprising background, demographics, and various samples of data from the core business activities. Given a broad set of requirements, you are required to provide a consultancy report,

providing a business requirements analysis, and recommending a data analytics toolset for deployment. The report will provide a justification for the chosen solution, and sample analyses to support the recommendations.

Formative work for Assessment 2

Your work on this assessment will be informed by the formative and summative feedback provided for assessment 1. In addition, prior to this summative submission, you will present a sketch draft of the report. This should highlight the overall structure, a brief requirements overview, and any provisional findings you may have generated. This work will be reviewed, and feedback given.

7. Mapping of assessment tasks for the module

Assessment tasks	1	2	3	4	5	6	7	8	9
Assessment 1: Analytics Tools Report,	x	x		n/a	n/a	n/a	n/a	n/a	
Assessment 2: Consultancy Report,		x	x	n/a	n/a	n/a	n/a	n/a	x

8. Key resources (e.g. reading, audio-visual)

Core Textbook

Stephenson, David. (2018). *Big Data Demystified: How to use big data, data science and AI to make better business decisions*. FT Publishing

Web Resources

[What is Power Query? | Microsoft Docs](#)

[Data Visualization | Microsoft Power BI](#)

[Software | JMP](#)

[SAS Viya | SAS](#)

[SPSS Software - United Kingdom | IBM](#)

[R: The R Project for Statistical Computing \(r-project.org\)](#)

[Welcome to Python.org](#)

[Analytics Academy \(google.com\)](#)

[Web analytics on steroids | Adobe Analytics](#)

[Brandwatch](#)

[Semrush - Online Visibility Management Platform](#)