

IB150-15 Foundations of Data Analysis for Management

26/27

Department

Warwick Business School

Level

Undergraduate Level 1

Module leader

Richard White

Credit value

15

Module duration

10 weeks

Assessment

100% coursework

Study location

University of Warwick main campus, Coventry

Description

Introductory description

Data has become ubiquitous in our personal and professional lives. This means that understanding the foundations of data analysis is paramount for developing critical thinking, excelling in a career or navigating the world of social and other media.

This introductory module covers the basic statistical concepts that everyone should master before progressing to more advanced techniques. All concepts are showcased using real-world examples and implemented using Excel software. The concepts covered in the module start at the very beginning with exploring where data comes from (i.e., measurement and data sampling), progresses to how data is summarised (i.e., summary statistics and visualisation), and finally looks at how data is used to make conclusions about data (i.e., confidence intervals, hypothesis testing, and basic regressions).

The module has several aims: 1) introduce students to the foundational statistical concepts and help them master them on both a theoretical and empirical level; 2) help students develop critical thinking skills when it comes to data analytics; 3) develop students' technical skills using Excel software.

This module is only open to WBS undergraduate students, and some students taking joint degrees

with WBS and another department. Students from other departments cannot take this module. To find detailed availability and to apply for this module, log in to my.wbs.ac.uk using your normal IT login details and apply via the my.wbs module application system. Once you've secured a place on my.wbs you should apply via your home department's usual process, which usually takes place via eVision.

Note that you do not require the module leader's permission to study a WBS module, so please do not contact them to request it.

[Module web page](#)

Module aims

The ability to use and make sense of quantitative information is an essential skill for any student taking a business or management degree. Foundation of Data Analysis for Management provides the students with the basic knowledge of statistics and probability.

After completing the module, the students will be able carry out analysis of data as well as be able to critically assess reported quantitative information. These skills are essential for any career in business and management. The module provides a foundation for the term 2 module Business Analytics (IB122) and for both other modules offered in the second and third year that develop and expand on this disciplinary area.

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.

Topics that are covered in the module:

What is data and how do we use it?

Summarizing data: descriptive statistics and data visualisation

Sampling data: sampling biases, uncertainty inherent to data analysis

The concepts of probability and probability distributions

Confidence intervals

Hypothesis testing

Introduction to regression analysis

Learning outcomes

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

- Identify the basic statistical concepts and specific techniques, recognizing the strengths and limitations of these methods and implementing them using real-world data.
- Examine the results of analysis and derive an inference supported by data.
- Examine how data analysis can be used to solve problems within modern business practices.
- Tackle real life quantitative problems and be able to convey results and discuss the issues

involved.

- Demonstrate problem solving skills.

Indicative reading list

[Reading lists can be found in Talis](#)

Subject specific skills

Apply basic quantitative tools, be aware of limitations.

Transferable skills

Use Excel for basic data analysis ranging from descriptive statistics to regression models.
Demonstrate critical and logical thinking.

Study

Study time

Type	Required
Lectures	10 sessions of 1 hour (7%)
Seminars	9 sessions of 1 hour (6%)
Online learning (independent)	10 sessions of 1 hour (7%)
Private study	47 hours (32%)
Assessment	73 hours (49%)
Total	149 hours

Private study description

Private Study.

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 A2

	Weighting	Study time	Eligible for self-certification
Assessment component			
Project	90%	65 hours	Yes (extension)
Reassessment component is the same			
Assessment component			
Participation	10%	8 hours	No
Reassessment component			
Individual Assignment			Yes (extension)

Feedback on assessment

Feedback will be provided via my.wbs.

Availability

Post-requisite modules

If you pass this module, you can take:

- IB3M5-15 Advanced Analysis for Marketing Decisions

Courses

This module is Core for:

- UIBA-N20B BSc in Management
 - Year 1 of N20B Management
 - Year 1 of N20B Management
 - Year 1 of N23K Management with Accounting
 - Year 1 of N234 Management with Digital Business
 - Year 1 of N235 Management with Entrepreneurship
 - Year 1 of N232 Management with Finance
 - Year 1 of N252 Management with Marketing

- Year 1 of N23L Management with Strategy and Organisation
- UIBA-N20F Undergraduate International Management
 - Year 1 of N20F International Management
 - Year 1 of N20F International Management
 - Year 1 of N20S International Management (with Accounting)
 - Year 1 of N20T International Management (with Chinese)
 - Year 1 of N20P International Management (with Entrepreneurship)
 - Year 1 of N20M International Management (with Finance)
 - Year 1 of N20U International Management (with French)
 - Year 1 of N20L International Management (with Marketing)
 - Year 1 of N20V International Management (with Spanish)
 - Year 1 of N20W International Management (with Strategy and Organisation)
 - Year 1 of N20N International Management with Digital Business
 - Year 1 of N20E Management (with Foundation Year)
 - Year 1 of N234 Management with Digital Business
- UIBA-N20E Undergraduate Management (with Foundation Year)
 - Year 2 of N20E Management (with Foundation Year)
 - Year 2 of N23N Management with Accounting (with Foundation Year and Placement Year)
 - Year 2 of N23M Management with Accounting (with Foundation Year)
 - Year 2 of N23E Management with Digital Business (with Foundation Year)
 - Year 2 of N23F Management with Entrepreneurship (with Foundation Year)
 - Year 2 of N23D Management with Finance (with Foundation Year)
 - Year 2 of N252 Management with Marketing
 - Year 2 of N254 Management with Marketing (with Foundation Year)
 - Year 2 of N23P Management with Strategy and Organisation (with Foundation Year)

This module is Optional for:

- Year 1 of UGEA-RN21 Undergraduate German and Business Studies
- Year 1 of UIPA-L8N1 Undergraduate Global Sustainable Development and Business