

# MODULE SPECIFICATION

1. **Title of the module**

Predictive Analytics & Big Data

2. **School or partner institution which will be responsible for management of the module**

Pearson College London

3. **The level of the module (Level 4, Level 5, Level 6 or Level 7)**

Level 6

4. **The number of credits and the ECTS value which the module represents**

15 credits (7.5 ECTS)

5. **Which term(s) the module is to be taught in (or other teaching pattern)**

This module can be run in any term: Autumn, Spring, or Summer

6. **Prerequisite and co-requisite modules**

Basic knowledge about analytics & data (ideally having attended the Level 5 course “Analytics & Data”)

7. **The programmes of study to which the module contributes**

- BA (Hons) Business Management - optional module
- BA (Hons) Business Management with Finance - optional module
- BA (Hons) Business Management with Global Industries - optional module
- BA (Hons) Business Management with Law - optional module
- BA (Hons) Business Management with Marketing - optional module

8. **The intended subject specific learning outcomes.**

**On successfully completing the module students will be able to:**

8.1 Demonstrate a systematic knowledge and critical understanding of the key issues and principles in modern data collection, processing and governance, including some of the key issues surrounding Public and Private Data, some of which may be at the forefront of the discipline.

8.2 Understand Big Data, as well as be able to extract insights from large data-sets.

8.3 Demonstrate a systematic knowledge and understanding of the differences between Structured, Unstructured and Semi-structured data and related theoretical concepts, as well as the opportunities surrounding Linked-Data, Semantic Technologies and the Internet of Things.

8.4 Analyse patterns and trends within large amounts of data and the differences between Descriptive, Predictive and Prescriptive data analytics.

8.5 Critically discuss and apply data analysis tools and techniques to complex scenarios in order to critically analyse information and propose solutions to problems, some of which may be at the forefront of the discipline.

9. **The intended generic learning outcomes.**

**On successfully completing the module students will be able to:**

9.1 Critically evaluate information and (sometimes incomplete) data to make judgements and identify solutions to problem.

9.2 Demonstrate the ability to make decisions in complex and unpredictable contexts.

9.3 Demonstrate numeracy, analytical, literacy (including IT literacy) skills as appropriate to contemporary business environments.

10. **A synopsis of the curriculum**

The era of automated data-driven decision-making includes three core activities:

1. data management
2. extracting insight from data, and
3. actioning decisions from those insights.

11. **Reading list** (Indicative list, current at time of publication. Reading lists will be published annually)

- Data Analytics Made Accessible. (2017). Maheshwari, A. Amazon Media EU S.à r.l..
- Predictive Analytics, Data Mining and Big Data: Myths, Misconceptions and Methods (Business in the Digital Economy). (2014). Finlay, S. Palgrave Macmillan
- Everybody Lies. Big Data, New Data, and What the Internet Can Tell Us About Who We Really Are. Stephens-Davidowitz, D. (2017). HarperCollins
- Misbehaving: The Making of Behavioural Economics. (2016). Thaler, R.H. Penguin
- Statistics for Economics, Accounting and Business Studies. (2017). Barrow, M. Pearson
- Fundamentals of Machine Learning for Predictive Data Analytics: Algorithms, Worked Examples, and Case Studies. (2015). Kelleher, J.D., Mac Namee, B., D`arcy, A. MIT Press
- Prescriptive Analytics. (2017). Blokdyk, G. Second Edition, CreateSpace Independent Publishing Platform
- Big Data: Using Smart Big Data, Analytics and Metrics To Make Better Decisions and Improve Performance. (2015). Marr, B. John Wiley & Sons Limited
- Data Smart: Using Data Science to Transform Information into Insight. (2013). Foreman, J, W. John Wiley & Sons Limited
- Saar-Tsechansky, M 2015, 'The Business of Business Data Science in IS Journals', MIS Quarterly
- Roberts, P 2015, 'Data Sampling for the Right Reasons', Business Intelligence Journal, 20, 1, pp. 33-38

12. **Learning and teaching methods**

For full details please see the teaching and learning strategy in the programme specification. Students can study this module in the interactive classes model or the mentored independent model. Those on the former will typically experience one lecture and one seminar each week.

Scheduled Hours: 25

Independent Study Hours: 125

Total Study Hours: 150

13. **Assessment methods**

13.1 Main assessment methods

- Coursework assignment of maximum of 3,500 words based on the analysis of a data set to demonstrate numerical, literacy and analytical skills, based on a practical business challenge. Fulfilling this coursework will require the use of analytics tools which will also be proof of IT literacy (75% of the overall grade).
- A blog of maximum of 1,000 words based on the analysis of a data set (25% of overall grade). The blog will incorporate the requirement to demonstrate numerical, literacy and analytical skills and, by its nature, will demonstrate IT literacy.

A pass must be achieved in the first element of assessment in order to pass the module.

13.2 Reassessment methods

14. **Map of module learning outcomes (sections 8 & 9) to learning and teaching methods (section 12) and methods of assessment (section 13)**

Module learning outcome		8.1	8.2	8.3	8.4	8.5	9.1	9.2	9.3
Learning/ teaching method	Hours allocated								
Private Study	125	X	X	X	X	X	X	X	
Lectures	10	X	X	X	X	X			
Seminars	15	X	X	X	X	X	X	X	
Assessment method									
Coursework (3,500 words)		X	X	X	X	X	X	X	X
Blog (1,000 words)					X				X

15. **Inclusive module design**

The Collaborative Partner recognises and has embedded the expectations of current equality legislation, by ensuring that the module is as accessible as possible by design. Additional alternative arrangements for students with Inclusive Learning Plans (ILPs)/ declared disabilities will be made on an individual basis, in consultation with the relevant policies and support services.

The inclusive practices in the guidance (see Annex B Appendix A) have been considered in order to support all students in the following areas:

- Accessible resources and curriculum
- Learning, teaching and assessment methods

16. **Campus(es) or centre(s) where module will be delivered**

Pearson College London

17. **Internationalisation**

The module is actively incorporating content and examples from international projects and is aiming to be applicable to analytics and data challenges on a global scale and scope with international background. Examples being referenced often include data from various different countries and markets all around the world and are intending to highlight the international context of the field.

**If the module is part of a programme in a Partner College or Validated Institution, please complete sections 18 and 19. If the module is not part of a programme in a Partner College or Validated Institution these sections can be deleted.**

18. **Partner College/Validated Institution**

Pearson College London

19. **University School responsible for the programme**

Kent Business School

# MODULE SPECIFICATION

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## FACULTIES SUPPORT OFFICE USE ONLY

Revision record – all revisions must be recorded in the grid and full details of the change retained in the appropriate committee records.

Date approved	Major/minor revision	Start date of the delivery of revised version	Section revised	Impacts PLOs (Q6&7 cover sheet)