1. **Title of the module**

Data Intelligence in Practice

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

Kent Business School

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

6

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

15

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

Spring

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

BUSN3130 (CB313) – Introduction to Statistics for Business and BUSN3640 (CB364) – Business Analysis Tools

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

Optional module for BSc Management, BSc International Business, and BSc Marketing programmes, compulsory module for BSc Management, Business Analytics pathway

1. **The intended subject specific learning outcomes.  
   On successfully completing the module students will be able to:**

8.1 Display conceptual understanding of the usefulness of data in improving business and organisational performance.

8.2 Develop systematic approaches to realising the benefits of data to organisations that align with overarching business strategy;

8.3 Critically analyse the data requirements for improving an area or process of a business.

8.4 Create visualizations and interactive dashboards to gain new insights from data.

8.5 Leverage the power of data-driven storytelling to help messages resonate with a business audience.

8.6 Understand how to employ participatory methods in identifying data requirements, structure complex problems, and ensure stakeholder uptake of data intelligence solutions.

1. **The intended generic learning outcomes.  
   On successfully completing the module students will be able to:**

9.1 Identify and critically analyse complex business problems amenable to a data-driven solution.

9.2 Appreciate the power of data intelligence for decision making and business value creation.

9.3 Work effectively individually and in groups.

9.4 Deliver effective oral presentations to engage a business audience and gain buy-in of the usefulness of analytics solutions for complex managerial problems.

1. **A synopsis of the curriculum**

The aim of this hands-on and highly practical module is to introduce students to the power of data intelligence in transforming the way businesses operate. Students will learn how to develop a successful big data strategy and deliver organisational performance improvements through the use of data analytics.

Indicative topics covered in the module include: business intelligence principles, data visualisation and dashboards, data warehouse and integration, artificial intelligence in business applications, big data, social network analysis, text mining, and participatory approaches for problem structuring.

Students will be exposed to a variety of case studies which demonstrate how pervasive data intelligence and analytics have become in every industry and sector, including examples from supply chain management, transport, marketing, finance, healthcare, and human resources. By the end of the module, students will have an understanding of how specific companies use big data and a grasp of the actionable steps and resources required to utilise data effectively.

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

Journal articles will be the main reading material used in the module. An indicative list is given below:

Ashrafi, A., Ravasan, A.Z., Trkman, P. and Afshari, S., 2019. The role of business analytics capabilities in bolstering firms’ agility and performance. International Journal of Information Management, 47, pp.1-15.

Chae, B., Olson, D. and Sheu, C., 2014. The impact of supply chain analytics on operational performance: a resource-based view. International Journal of Production Research, 52(16), pp.4695-4710.Holsapple, C., Lee-Post, A. and Pakath, R., 2014. A unified foundation for business analytics. Decision Support Systems, 64, pp.130-141.

Checkland P. 2000. Soft Systems Methodology: A Thirty Year Retrospective. Syst. Res. 17, S11–S58.

Chen, H., Chiang, R.H. and Storey, V.C., 2012. Business intelligence and analytics: From big data to big impact. MIS quarterly, 36(4).

Few, S. and Edge, P., 2007. Data visualization: past, present, and future. IBM Cognos Innovation Center.

Franco L., Montibeller G, 2010. Facilitated modelling in operational research. European Journal of Operational Research, 205, pp. 489-500.

Kache, F. and Seuring, S., 2017. Challenges and opportunities of digital information at the intersection of Big Data Analytics and supply chain management. International Journal of Operations & Production Management, 37(1), pp.10-36.

Seddon, P.B., Constantinidis, D., Tamm, T. and Dod, H., 2017. How does business analytics contribute to business value?. Information Systems Journal, 27(3), pp.237-269.

Trieu, V.H., 2017. Getting value from Business Intelligence systems: A review and research agenda. Decision Support Systems, 93, pp.111-124.

Wang, Y., Kung, L. and Byrd, T.A., 2018. Big data analytics: Understanding its capabilities and potential benefits for healthcare organizations. Technological Forecasting and Social Change, 126, pp.3-13.

The following textbooks are also recommended:

Checkland P. (1999). *Systems Thinking, Systems Practice*. Chichester: John Wiley & Sons.

Cole Nussbaumer Knaflic. (2019). *Storytelling with Data: Let's Practice!* Hoboken, NJ: John Wiley & Sons.

Marr, B. (2016). *Big Data in Practice: How 45 Successful Companies Used Big Data Analytics to Deliver Extraordinary Results*. Chichester: Wiley.

Milligan, J.N. (2019). *Learning Tableau 2019: Tools for Business Intelligence, data prep, and visual analytics*. 3rd Edition. Birmingham: Packt Publishing

Sharda, R., Delen, D, & Turban, E. (2017). *Business Intelligence, Analytics, and Data Science: A Managerial Perspective*. 4th Edition. Harlow: Pearson.

1. **Learning and teaching methods**

Total contact hours: 22

Private study hours: 128

Total study hours: 150

1. **Assessment methods**
   1. Main assessment methods

In-Course Test (45 minutes) 20%

In-Course Test (45 minutes) 20%

In-Course Test (45 minutes) 20%

Group Project (Excel based) 40%

13.2 Reassessment methods

100% coursework

1. **Map of module learning outcomes (sections 8 & 9) to learning and teaching methods (section12) and methods of assessment (section 13)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Module learning outcome** | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 9.1 | 9.2 | 9.3 | 9.4 |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |  |  |
| Private Study | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Lectures/seminars | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Assessment method** |  |  |  |  |  |  |  |  |  |  |
| ICTs | ✓ | ✓ | ✓ | ✓ |  | ✓ | ✓ | ✓ | ✓ |  |
| Group project | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

1. **Inclusive module design**

The School 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:

a) Accessible resources and curriculum

b) Learning, teaching and assessment methods

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

Canterbury

1. **Internationalisation**

The content in this module is universally applicable but any local adaptations that are needed will be explained in the case studies used.

Similarly, both the subject specific and generic learning outcomes will transfer to the international context. Any modifications needed will be highlighted during the course of the module.

**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 delivery of revised version | Section revised | Impacts PLOs (Q6&7 cover sheet) |
|  |  |  |  |  |
|  |  |  |  |  |