RMBI 1020 Business Intelligence for Data-Driven Decisions (L1)
Spring Semester 2026

Course Outline

Course Instructor	Dr. Jason MW HO Senior Lecturer Department of Information Systems, Business Statistics, and Operations Management (ISOM)
Office Location	LSK 6048A
Office Hours	Friday, 1230 – 1430
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Teaching Assistant (TA)	Miss Vanessa WEI
Office Location	LSK 4049C
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Class Schedule and Location

1030 – 1150 (Mon & Wed)	2 February – 6 May 2026 (except 18 February, 6 April, and 8 April)	LSK G005

Course Description

Business intelligence (BI) is a discipline that comprises a collection of principles, methodologies and processes for retrieving meaningful insights from data in the business world, with the goal of improving an organization's operations, decision making, business planning and projection.

The aim of this course is to introduce students to the essence of BI, fostering critical thinking and intellectual curiosity about the role of data in decision-making.

Through **extensive hands-on experiences and practices** on real-life and relevant applications of BI, students are expected to develop the essential ability of engaging and working with data they will encounter in professional, public, and personal contexts in today's data-driven world.

Intended Learning Outcomes (ILOs)

By the end of this course, students should be able to:

ILO1: Understand and master basic principles in business intelligence.
ILO2: Examine and describe how business intelligence can facilitate business decision-making.
ILO3: Apply various data analytical techniques on small datasets for a simple implementation of business intelligence to extract meaningful and appropriate insights.
ILO4: Interpret and communicate data-driven insights effectively.

Assessment and Grading

This course will be assessed using criterion-referencing, and grades will not be assigned using a curve.

Assessments:

Assessment Task	Contribution to Overall Course grade (%)	Due Date
Homework assignment	25	Week 3 to 13
Midterm examination	25	25 March 2026
Final examination	50	Spring term examination period; exact date to be announced by AR

Mapping of Course ILOs to Assessment Tasks:

Assessment Task	Mapped ILOs	Explanation
Homework assignment	ILO1, ILO2, ILO3, ILO4	This task allows students to solve a real problem in business environment, involving applications of an appropriate analytical technique to analyze data in a given situation, and interpretation and presentation of data-driven insights from the analysis.
Midterm examination	ILO1, ILO2, ILO3, ILO4	Midterm examination evaluates students' ability in mastering basic principles in business intelligence, selection and application of descriptive analytics, and correct interpretation and effective presentation of data-driven insights from the data analysis.
Final examination	ILO1, ILO2, ILO3, ILO4	Final examination evaluates students' ability in mastering basic principles in business intelligence, selection and application of descriptive, predictive and prescriptive analytics, and correct interpretation and effective presentation of data-driven insights from the data analysis.

More information about Assessment Tasks:

Assessment Task	More Descriptions
Homework assignment	• 10 sets of assignments, with 1 set on each Module of the course • Performance in the BEST 7 out of 10 sets count 25% of overall course grade. • All use of generative AI is restricted.

Midterm examination	• Access to reference textbooks and lecture materials allowed
	• Scheduled on **25 March 2026 (in-class)**
	• **Absence policy:**
	  ○ Students must (i) obtain prior approval from the course instructor by providing a legitimate reason with relevant supporting documents, or (ii) submit a valid medical certificate justifying their absence to the course instructor within 3 days of the exam date.
	  ○ Students who meet the above condition (i) or (ii) will not attend any make-up examination. They must attend the final examination, and their final examination score will count 25%+50% = 75% of their overall course performance.

Final examination	• Access to reference textbooks and lecture materials allowed
	• **Date and venue to be announced**
	• **Absence policy:**
	  ○ Students must fill in and submit a specific form to report their case, providing appropriate documents, to the Academic Registry within 1 week of the scheduled exam date. Refer to the following webpage for more information - https://registry.hkust.edu.hk/resource-library/extenuating-circumstances-affecting-assessment. Upon approval by AR, a make-up examination without marks deduction will be available.
	  ○ Students must sit for the final examination to pass the course. A student who misses the final examination will be automatically assigned an F grade.

Final Grade Descriptors:

Grade	Short Description	Explanation
A	Excellent Performance	Demonstrates a comprehensive grasp and understanding of basic principles in business intelligence, of selection and application of data analytical techniques, and of interpretation and presentation of data-driven insights from the data analysis
B	Good Performance	Demonstrates a high level of understanding of basic principles in business intelligence, of selection and application of data analytical techniques, and of interpretation and presentation of data-driven insights from the data analysis
C	Satisfactory Performance	Demonstrates adequate knowledge of basic principles in business intelligence, of selection and application of data analytical techniques, and of interpretation and presentation of data-driven insights from the data analysis

D	Marginal Pass	Demonstrates little or inconsistent knowledge of basic principles in business intelligence, of selection and application of data analytical techniques, and of interpretation and presentation of data-driven insights from the data analysis
F	Fail	Demonstrates a lack of understanding of basic principles in business intelligence, insufficient knowledge in selection and application of data analytical techniques, and poor skills in interpretation and presentation of data-driven insights from the data analysis

Communication and Feedback

- Channel your enquiries regarding
  - administration and logistics of the course (e.g., missing lectures, issues about submission or grading of homework assignments, absence in exam, etc.) to TA.
  - teaching and learning materials discussed in lectures to course instructor.
- Marks and feedback for individual assessed tasks will be communicated via Canvas within two weeks of submission.
- Any discrepancies in assessment marks posted in gradebook of Canvas should be reported to TA without any delay.

Late submission Policy

To ensure fairness for students who submit homework assignments on time according to records on Canvas, no late submission of assignments will be accepted, with no exception due to whatsoever reason.

Course Materials

- Class slides, and other teaching materials available on Canvas in HKUST iLearn (https://ilearn.ust.hk/iLearn/home.html), or HKUST iLearn App on App Store or Google Play
- Reference Textbooks:
  - ***Business Analytics*** (3rd ed), James R. Evans, Pearson (2020).
  - ***Data Science for All***, Brennan Davis and Hunter Glanz, Pearson (2026).
- Required software: MS Excel

Course AI Policy

Restrict all use of generative AI for assessment: You are prohibited from using generative artificial intelligence (AI) to produce any materials or content related to all take-home assessments, such as homework assignments.

Academic Integrity

Students are expected to adhere to the university's academic integrity policy. Students are expected to uphold HKUST's Academic Honor Code and to maintain the highest standards of academic integrity. The University has zero tolerance of academic misconduct. Please refer to Academic Integrity | HKUST - Academic Registry for the University's definition of plagiarism and ways to avoid cheating and plagiarism.

Course Plan (subject to changes)

Module	Topic/Activity	Date	Reference Textbook: Chapters/Sections
1	Introduction to Business Analytics	Feb 2	Evans: 1 D&G: 1.1-1.4
1A	Basic Excel skills	Feb 4	Evans: Appendix A1
2	Database Analytics	Feb 9, 11	Evans: 2
3 & 3A	Data Wrangling: Preprocessing	Feb 16, 23	D&G: 2.1-2.7
4	Data Visualization	Feb 25; Mar 2	Evans: 3
5	Exploratory Data Analysis/Descriptive Statistics	Mar 4, 9	Evans: 4 D&G: 4.1-4.6
6	Trendlines and Regression Analysis	Mar 11, 16, 18, 23	Evans: 8
	Midterm Examination	**Mar 25**	
7	Forecasting Techniques	Mar 30; Apr 1, 13	Evans: 9
8	Linear Optimization	Apr 15, 20, 22	Evans: 13
9	Integer and Nonlinear Optimization	Apr 27, 29	Evans: 14
10	Introduction to Data Mining	May 4, 6	Evans: 10