

Prepared by Dr. Wesam Ahmed

IT393
Business Intelligence

Lecture 1



Introduction to Business Intelligence

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Business Intelligence(BI) (Cr 3)



Course Title	Business Intelligence(BI)
Course Code	IT393
Prerequisites	IT261, IT383
University	Midocean University

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Course Description

Business intelligence is an umbrella term that combines architectures, tools, databases, analytical tools, applications and methodologies. The major objectives of business intelligence is to enable interactive access to data and to give business managers the ability to conduct analysis and make better decisions. Decision support systems are computer-based information systems that combine models/methods and data in an attempt to solve semi/non-structured decision problems with extensive user involvement through a friendly user interface. Business high-level decisions are often semi/non-structured and require an increased level of intelligent and technical support, in particular, when they become rich in data. Decision support systems can be integrated with variable business intelligence techniques to support related decision problem solving. The subject covers how to design, implement and integrate business intelligence techniques with methods to support business decision-making. The students will be made familiar with Data warehouse, OLAP, Data and Text Mining and data visualization in order to understand different component of Business Intelligence systems.

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Course Objective:

To provide students with a comprehensive understanding of Business Intelligence (BI) concepts, methodologies, tools, and applications, enabling them to effectively use operational data to create data warehouses, apply data mining and analytics techniques to gain new insights into organizational operations, and understand the design and implementation of BI systems for effective business problem-solving.

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Course Learning Outcomes:

1. Understands the importance of Business Intelligence in today's competitive business environment
2. Understands the basic concepts, BI architectures, methodologies, and strategies as well as with tools and methods used in the business environment
3. Grasp the basic knowledge of the ETL process
4. Grasp the basic understanding of business-driven agile BI-development
5. Demonstrate basic skills in using two leading BI tools (e.g., Tableau, Power BI)
6. Effectively communicate BI analysis results and recommendations to diverse stakeholders.

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Major Topics:

1. Basics about Decision Making.
2. Operations Research and Decision Making.
3. The essentials of Business Intelligence (BI)
4. Introduction and history of Business Intelligence
5. Components of Business Intelligence
6. Data warehouse.

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Major Topics:

7. Modelling Data warehouse.
8. OLAP operations.
9. Data Mining
10. Text Mining
11. Data Visualization
12. Final Project

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Textbook(s) or References

1. Scheps, S., 2008. *Business intelligence for dummies*. John Wiley & Sons.
2. Gupta, S., Pinto, S., Sankhe-Savale, S., Gillet, J. C., & Cherven, K. M. (2022). *The Tableau Workshop*. Packt Publishing Ltd.
3. Kolokolov, A., & Zelensky, M. (2024). *Data visualization with Microsoft power BI*. " O'Reilly Media, Inc."
4. Robert Nisbet, et. al. (2009) Handbook of Statistical Analysis & Data Mining Applications. Elsevier/Academic Press. San Diego, California. ISBN: 978-0-12-374765-5.
5. Decision Support & Business Intelligence Systems; Turban, et al. 9th edition, ISBN: 978-0136107293.



Thank You