DEREE COLLEGE SYLLABUS FOR: CS 4249 BUSINESS INTELLIGENCE	
(Updated Fall 2025)	**UK LEVEL 6** **UK Credits: 15** **US Credits: 3/0/3**
PREREQUISITES:	CS 1070 Introduction to Information Systems CS 2179 Business Information Systems **or** CS 3051 Business Driven Technology
CATALOGUE DESCRIPTION:	Business Intelligence characteristics, architecture, models, and processes. Data warehouse: building, maintaining, and accessing techniques. Business Intelligence analysis and ETL methods. Data, Web, and Text mining. Big Data analysis. Business performance management, business processes, and data flows. Emphasis on analytical methodologies for data-driven decision making, the application of consulting approaches to complex business problems, and the utilization of optimization techniques to enhance operational efficiency and strategic outcomes.
RATIONALE:	This module provides students with a comprehensive understanding of the planning, design, development, analysis, and evaluation of effective Business Intelligence (BI) Information Systems. Emphasis is placed on the strategic importance of BI as a powerful decision support tool that enables organizations to transform data into actionable insights. Students will explore the rationale behind the adoption of BI systems in modern enterprises, and examine established methodologies and technologies used in their implementation. Through this course, students will develop the analytical skills and technical proficiency required to support critical business functions, enhance organizational performance, and improve decision-making capabilities across all levels of the enterprise.
LEARNING OUTCOMES:	As a result of taking this course, the student should be able to: 1. Evaluate Business Intelligence characteristics and alternatives, including trends related to data warehousing and data/web/text mining. 2. Synthesise the components, models, designs and other elements applicable for a business intelligence solution.
METHOD OF TEACHING AND LEARNING:	In congruence with the learning and teaching strategy of the College, the following tools/activities are used: ➢ Lectures and class discussions. Practical sessions, gamification and problem solving. ➢ Office hours held by the instructor to provide further assistance to students. ➢ Use of the Blackboard Learning platform to further support communication, by posting lecture notes, assignment instruction, timely announcements, and online submission of assignments.

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<td>ASSESSMENT:</td>
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Summative:
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<tr><td>First Assessment - Midterm Examination (in class, 1 hour)</td><td>40%</td><td>Combination of answers to essay questions and case problems</td></tr>
<tr><td>Final Assessment – Research Project</td><td>60%</td><td>A business intelligence solution (2,500-2,700 words)</td></tr>
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Formative:
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<tr><td>Case problems</td><td>0%</td></tr>
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The formative assessment(s) aim to prepare students for the summative ones.

The First Assessment tests Learning Outcome 1.
The Final Assessment tests Learning Outcomes 1 and 2.

The final grade for this module will be determined by averaging all summative assessment grades, based on the predetermined weights for each assessment. If students pass the comprehensive assessment that tests all Learning Outcomes for this module and the average grade for the module is 40 or higher, students are not required to resit any failed assessments.

(Guidelines and assessment rubrics are distributed on the first day of classes along with the course outline).
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<td>INDICATIVE READING:</td>
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REQUIRED READING:

Ramesh Sharda, Dursun Delen and Efraim Turban. “Business Intelligence, Analytics, Data Science, and AI”. Pearson, 2023, ISBN- 978-0137931224.

RECOMMENDED READING:

Cindi Howson. "Successful Business Intelligence: Unlock the Value of BI & Big Data". McGraw-Hill Osborne, latest edition, ISBN-13: 978-0071809184.

Davenport, T. H., Parra-Moyano, J., Schmedders, K., & Schulte, S. (2023, November 17). Use GenAI to uncover new insights into your competitors. Harvard Business Review. https://hbr.org/2023/11/use-genai-to-uncover-new-insights-into-your-competitors

Thomas H. Davenport. “Big Data at Work: Dispelling the Myths, Uncovering the Opportunities”. Harvard Business Review Press, latest edition, ISBN-13: 978-1422168165.

Shin, H., Ryu, J., & Jo, Y. (2025). Navigating artificial intelligence adoption in hospitality and tourism: managerial insights, workforce transformation, and a future research agenda. International Journal of Hospitality Management, 128, 104187. doi:10.1016/j.ijhm.2025.104187

Gert H. N. Laursen, Jesper Thorlund. “Business Analytics for Managers: Taking Business Intelligence Beyond Reporting”. Wiley, latest edition, ISBN:
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	978-1119298588. Busany, N., Hadar, E., Hadad, H., Rosenblum, G., Maszlanka, Z., Akhigbe, O., & Amyot, D. (2024). *Automating Business Intelligence Requirements with Generative AI and Semantic Search*. arXiv preprint arXiv:2412.07668. https://arxiv.org/abs/2412.07668 Rajiv Sabherwal and Irma Becerra-Fernandez. "Business Intelligence". Wiley, latest edition, ISBN-13: 978-0470461709. Foster Provost and Tom Fawcett. "Data Science for Business: What you need to know about data mining and data-analytic thinking". O'Reilly Media, latest edition, ISBN-13: 978- 1449361327. Jiang, J., Xie, H., Shen, Y., Zhang, Z., Lei, M., Zheng, Y., ... & Chen, P. (2024). *SiriusBI: Building End-to-End Business Intelligence Enhanced by Large Language Models*. arXiv preprint arXiv:2411.06102. https://arxiv.org/abs/2411.06102 S Chaudhuri, U Dayal, V Narasayya. "An overview of business intelligence technology". Communications of the ACM, Vol. 54 Issue 8, 2011. Big Data to Big Impact". MIS Quarterly, Vol. 36 Issue 4, 2012.
INDICATIVE MATERIAL: (e.g. audiovisual, digital material, etc.)	**REQUIRED MATERIAL**: N/A **RECOMMENDED MATERIAL**: N/A
COMMUNICATION REQUIREMENTS:	Use of appropriate academic conventions as applicable in oral and written communications.
SOFTWARE REQUIREMENTS:	• MS-Office 365 applications • A Business Intelligence web-based platform
WWW RESOURCES:	http://www.dw-institute.com/ http://www.dwinfocenter.org/ http://www.datawarehousing.com/ https://www.teradatauniversitynetwork.com
INDICATIVE CONTENT:	1. An Overview of Business Intelligence, Analytics and Decision Support 2. Data Warehousing 3. Business Reporting, Visual Analytics & Business Performance Management 4. Data Mining for Business Intelligence 5. Text, Web, and Social Analytics 6. Big Data and Analytics 7. Business Intelligence Emerging Trends and Future Directions.