

**DEREE COLLEGE SYLLABUS FOR: CS 3245 DATA MANAGEMENT FOR BUSINESS**

(Updated Fall 2021)

**UK LEVEL: 5**  
**UK CREDITS: 15**  
**US CREDITS: 3/1/3**

<b>PREREQUISITES:</b>	CS 1070 Introduction to Information Systems  CS 2179 Business Information Systems <b>or</b> CS 3051 Business Driven Technology
<b>CATALOG DESCRIPTION:</b>	Analysis of business requirements; database management systems concepts; data modelling; database design; normalization; structured query language; database integration; information analysis and reporting; online analytical processing; decision-making support; data mining; business intelligence.
<b>RATIONALE:</b>	The module is intended to provide students with the required theoretical and practical knowledge for using Database Management Systems to support MIS. It exposes students to the fundamentals of designing a relational database, mapping business requirements to the logical and physical design of DBMSs and using reporting and OLAP tools to extract critical information to make business decisions.
<b>LEARNING OUTCOMES:</b>	As a result of taking this course, the student should be able to:  <ol style="list-style-type: none"><li>1. Analyze business requirements for a management information system to support business operations and solve data management problems.</li><li>2. Design the database schema and construct an MIS database.</li><li>3. Apply RDBMS and external MIS tools to create reports for business decision making.</li><li>4. Analyze business operations using On-line Analytical Processing.</li></ol>
<b>METHOD OF TEACHING AND LEARNING:</b>	In congruence with the teaching and learning strategy of the college, the following tools are used:  <ul style="list-style-type: none"><li>➤ Lectures and class discussions. Laboratory sessions involving practice in simple program design and development, and in the design and development of databases.</li><li>➤ Office hours held by the instructor to provide further assistance to students.</li><li>➤ Use of the Blackboard Learning platform (communication, posting of lecture notes / assignments' instructions / timely announcements, online submission of assignments, etc.).</li></ul>

<b>ASSESSMENT:</b>	<p><b>Summative:</b></p> <table border="1" data-bbox="516 86 1390 275"> <tr> <td data-bbox="516 86 881 212">First Assessment - Midterm Project</td> <td data-bbox="889 86 979 212"><b>40%</b></td> <td data-bbox="987 86 1390 212">Business requirements analysis, normalization and implementation of an MIS database</td> </tr> <tr> <td data-bbox="516 212 881 275">Final Assessment - Project</td> <td data-bbox="889 212 979 275"><b>60%</b></td> <td data-bbox="987 212 1390 275">Business case study (2,200-2,400 words)</td> </tr> </table> <p><b>Formative:</b></p> <table border="1" data-bbox="516 338 1390 411"> <tr> <td data-bbox="516 338 1182 373">Take-home assignments</td> <td data-bbox="1190 338 1390 373"><b>0%</b></td> </tr> <tr> <td data-bbox="516 373 1182 411">Business case studies and presentation</td> <td data-bbox="1190 373 1390 411"><b>0%</b></td> </tr> </table> <p>The formative assessment(s) aim to prepare students for the summative ones.</p> <p>The First Assessment tests Learning Outcomes 1 and 2. The Final Assessment tests Learning Outcomes 3 and 4.</p> <p>Students are required to resit failed assessments in this module.</p> <p>(Guidelines and assessment rubrics are distributed on the first day of classes along with the course outline).</p>	First Assessment - Midterm Project	<b>40%</b>	Business requirements analysis, normalization and implementation of an MIS database	Final Assessment - Project	<b>60%</b>	Business case study (2,200-2,400 words)	Take-home assignments	<b>0%</b>	Business case studies and presentation	<b>0%</b>
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Business case studies and presentation	<b>0%</b>										
<b>INDICATIVE READING:</b>	<p><b>REQUIRED READING:</b></p> <p>Database Design – 2<sup>nd</sup> edition, by Adrienne Watt &amp; Nelson Eng. 2015. OpenLibra: Open-Source e-textbook, available at <a href="https://openlibra.com/en/book/download/database-design-2nd-edition">https://openlibra.com/en/book/download/database-design-2nd-edition</a></p> <p><b>RECOMMENDED READING:</b></p> <p>Databases Demystified, by Andy Oppel. ISBN: 9780071747998. McGraw-Hill, 2011.</p> <p>J. Greenspan, B. Bulger: MySQL/PHP Database applications Foundations of Computer Science 3e, 140808841X, Behrouz A. Forouzan. Cengage Learning, ©2014 <a href="http://www.igi-global.com/journal/journal-database-management-idm/1072">http://www.igi-global.com/journal/journal-database-management-idm/1072</a> <a href="https://www.imis-web.org/issues">https://www.imis-web.org/issues</a></p>										
<b>INDICATIVE MATERIAL:</b> (e.g. audiovisual, digital material, etc.)	<p><b>REQUIRED MATERIAL:</b> N/A</p> <p><b>RECOMMENDED MATERIAL:</b> N/A</p>										
<b>COMMUNICATION REQUIREMENTS:</b>	Use of appropriate academic conventions as applicable in oral and written communications.										
<b>SOFTWARE REQUIREMENTS:</b>	<ul style="list-style-type: none"> <li>• MS-Office 365 applications</li> <li>• A database system, such as MySQL, MS-Server or Oracle RDBMS</li> </ul>										
<b>WWW RESOURCES:</b>	<p><a href="http://www.mysql.com">www.mysql.com</a></p> <p><a href="https://www.codecademy.com/articles/what-is-rdbms-sql">https://www.codecademy.com/articles/what-is-rdbms-sql</a></p> <p><a href="https://www.oracle.com/database/">https://www.oracle.com/database/</a></p> <p><a href="https://docs.microsoft.com/en-us/azure/architecture/data-guide/relational-data/online-analytical-processing">https://docs.microsoft.com/en-us/azure/architecture/data-guide/relational-data/online-analytical-processing</a></p>										

**INDICATIVE CONTENT:**

1. Organize and analyze business requirements for an MIS
2. Databases for Management Information Systems
3. Reporting and data analysis for business
4. RDBMS and third-party tools for reporting and OLAP.