

| DEREE COLLEGE SYLLABUS FOR: CS 3247 KNOWLEDGE-BASED DECISION MAKING | |
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| (Updated Spring 2021) | UK LEVEL: 5 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 |
| CATALOG DESCRIPTION: | Decision Making models; Knowledge Management Systems concepts; role of knowledge in business; organisational learning; knowledge management; decision making processes; Business Analytics; Artificial Intelligence. |
| RATIONALE: | This module will introduce basic concepts in knowledge management and a variety of methods that can be used in individual and organizational decision-making and problem-solving. The focus is to capture knowledge to provide workable alternatives for managers rather than replacing judgment with an optimized solution. Taxonomies of Knowledge, Knowledge Processes Models and Knowledge Management systems are supplying the input for justifying sustainable strategies in businesses towards improved performance and competitive advantage. The new era of data driven decision making is analysed with reference to Business Analytics and Artificial Intelligence. Special focus is paid on Business Analytics tools and their use for Decision Making problems including Optimization, Data Mining and Key Performance Indicators. The module will deploy active learning and case studies to motivate students in recommending practical data-driven solutions for real-world decision-making problems in businesses and organizations. For this reason, open data repositories will be used and deployed together with Tableau platform. |
| LEARNING OUTCOMES: | As a result of taking this module, the student should be able to: <ol style="list-style-type: none"> 1. Analyse how knowledge management can support decision making. 2. Apply decision making and problem-solving methods for diversified management cases. 3. Combine knowledge management strategies with decision making technologies to improve knowledge-based business performance. |
| METHOD OF TEACHING AND LEARNING: | In congruence with the learning and teaching strategy of the College, the following tools/activities are used: <ul style="list-style-type: none"> ➤ Lectures and class discussions. Laboratory practical sessions and problem solving. Case studies and best practices discussion. ➤ Use of Tableau Platform and Open Data repositories ➤ Active Learning Strategies ➤ Office hours held by the instructor to provide further assistance to students. |

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| | <p>➤ Use of the Blackboard Learning platform to further support communication, by posting lecture notes, assignment instructions, timely announcements, and online submission of assignments.</p> | | | | | | | | |
| <p>ASSESSMENT:</p> | <p>Summative:</p> <table border="1" data-bbox="516 373 1479 653"> <tr> <td data-bbox="516 373 992 478">First Assessment - Midterm Examination</td> <td data-bbox="992 373 1097 478">40%</td> <td data-bbox="1097 373 1479 478">Combination of answers to essay questions and case problems</td> </tr> <tr> <td data-bbox="516 478 992 653">Final Assessment - Project</td> <td data-bbox="992 478 1097 653">60%</td> <td data-bbox="1097 478 1479 653">Analysis of a decision-making case utilising knowledge theories and concepts (2,200-2,400 words)</td> </tr> </table> <p>Formative:</p> <table border="1" data-bbox="516 716 1479 758"> <tr> <td data-bbox="516 716 1252 758">Coursework: case problems</td> <td data-bbox="1252 716 1479 758">0%</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 1 and 3.</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 Examination | 40% | Combination of answers to essay questions and case problems | Final Assessment - Project | 60% | Analysis of a decision-making case utilising knowledge theories and concepts (2,200-2,400 words) | Coursework: case problems | 0% |
| First Assessment - Midterm Examination | 40% | Combination of answers to essay questions and case problems | | | | | | | |
| Final Assessment - Project | 60% | Analysis of a decision-making case utilising knowledge theories and concepts (2,200-2,400 words) | | | | | | | |
| Coursework: case problems | 0% | | | | | | | | |
| <p>INDICATIVE READING:</p> | <p>REQUIRED READING:</p> <p>Thomas Davenport, Jeanne Harris, “Competing on Analytics: Updated, with a New Introduction: The New Science of Winning”, Harvard Business Review Press”, Revised edition (August 29, 2017)</p> <p>RECOMMENDED READING:</p> <p>Kimiz Dalkir, “Knowledge Management in Theory and Practice, The MIT Press.</p> <p>Ashok Jashapara. “Knowledge Management: An Integrated Approach”. Prentice Hall, latest edition, ISBN-13: 978-0273726852.</p> <p>Kimiz Dalkir. “Knowledge Management in Theory and Practice”. MIT Press, latest edition, ISBN-13: 978-0262015080.</p> <p>Donald Hislop. “Knowledge Management in Organizations: A Critical Introduction”. Oxford UP, latest edition, ISBN-13: 978-0199691937.</p> <p>Ronald Maier. “Knowledge Management Systems: Information and Communication Technologies for Knowledge Management”. Springer, latest edition, ISBN-13: 978-3540714071.</p> | | | | | | | | |

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| | <p>Rajeev K. Bali, Nilmini Wickramasinghe and Brian Lehane. "Knowledge Management Primer". Routledge, latest edition, ISBN-13: 978-0415992336.</p> <p>Irma Becerra-Fernandez and Rajiv Sabherwal. "Knowledge Management: Systems and Processes". Sharpe, latest edition, ISBN-13: 978-0765623515.</p> <p>Edna Pasher and Tuvya Ronen. "The Complete Guide to Knowledge Management". Wiley, latest edition, ISBN-13: 978-0470881293.</p> <p>Nonaka, I. and Takeuchi, H. (1995). The knowledge-creating company, New York, Oxford: Oxford University Press.</p> <p>Davenport, T. and Prusak, L. (1998). Working knowledge, Boston, MA: Harvard, Business School Press.</p> <p>Kevin C. Desouza and Scott Paquette. "Knowledge Management: An Introduction". Facet Publishing, latest edition, ISBN-13: 978-1856047357.</p> |
| <p>INDICATIVE MATERIAL: (e.g. audiovisual, digital material, etc.)</p> | <p>REQUIRED MATERIAL: N/A</p> <p>RECOMMENDED MATERIAL: N/A</p> |
| <p>COMMUNICATION REQUIREMENTS:</p> | <p>Use of appropriate academic conventions as applicable in oral and written communications.</p> |
| <p>SOFTWARE REQUIREMENTS:</p> | <ul style="list-style-type: none"> • MS-Office 365 applications • Groupware and/or document management software • Tableau or another Business Analytics platform. |
| <p>WWW RESOURCES:</p> | <p>https://aisnet.org/</p> <p>https://www.misq.org/</p> <p>https://www.emeraldinsight.com/journal/jkm</p> <p>https://www.microsoft.com/en-us/research/research-area/artificial-intelligence/</p> <p>https://www.tableau.com/</p> <p>https://rapidminer.com/</p> <p>https://ec.europa.eu/info/designing-next-research-and-innovation-framework-programme/what-shapes-next-framework-programme_en</p> |
| <p>INDICATIVE CONTENT:</p> | <ol style="list-style-type: none"> 1. Introduction to Knowledge Management 2. The Concept of Knowledge and organisational learning 3. Data Driven Decision Making 4. Knowledge Process Models 5. Knowledge Management Technologies 6. Data Mining Methods 7. Decision Making Models 8. Analytics and KPIs 9. Knowledge Management Strategies |

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| | <ol style="list-style-type: none">10. Linking Knowledge Management Strategies to Business Strategies11. Introduction to Business Analytics and Business Intelligence12. Introduction to Artificial Intelligence13. Managing Knowledge for Organizational Value14. Technology driven Innovation15. Research on Knowledge Management: Case Studies from European Funded Projects and Industry Products – Horizon Europe. |
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