

H9BIBA: Business Intelligence and Business Analytics

Module Code:	H9BIBA
Long Title	Business Intelligence and Business Analytics APPROVED
Title	Business Intelligence and Business Analytics
Module Level:	LEVEL 9
EQF Level:	7
EHEA Level:	Second Cycle
Credits:	5
Module Coordinator:	Vikas Sahni
Module Author:	Jenette Carson
Departments:	School of Computing
Specifications of the qualifications and experience required of staff	MSc/PhD in a computing or cognate discipline. May have industry experience also.
Learning Outcomes	
<i>On successful completion of this module the learner will be able to:</i>	
#	Learning Outcome Description
LO1	Critically analyse advanced Business Intelligence and Business Analytics methodologies in order to assess best practice guidance when applied to operational data of a business
LO2	Investigate and evaluate key concepts and advanced Business Intelligence and Business Analytics techniques and assess how to apply which technique on complex datasets and practical problem domains.
LO3	Contextualise, research and utilise current data approaches, applications and technologies in order to develop Business Intelligence and business analytics strategies to address the operational and analytical requirements of an organisation
LO4	Critically review and apply appropriate data mining research and assess research methods
Dependencies	
Module Recommendations	
No recommendations listed	
Co-requisite Modules	
No Co-requisite modules listed	
Entry requirements	A level 8 degree or its equivalent in any discipline

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Module Content & Assessment			
Indicative Content			
Intelligent Enterprises Agile Enterprises, Operating Strategies, Continuous Improvement Programs			
Enterprise Systems Evolution – MRP, CL MRP, MRP II, ERP, ES Packages, Balanced Scorecard			
BI and Dashboards Views v Reports, Types of Dashboards, Advantages of Dashboards, The Funnel			
Consumer Behaviour models Behaviourist v Cognitivist, Lawson's, EKB, and Howard and Sheth's models			
Operational CRM Systems Overview and Demo of a commercial system such as Microsoft Dynamics CRM			
Implementing Enterprise BI systems Data Warehousing and Data Marts, Data mining, Online Analytical Process (OLAP)			
Implementing CRM systems Fit-Gap Analysis, Integration with Heterogeneous systems, Data integration, Information Lifecycle Management, Data protection, security and ethical considerations			
Customer-Centric Enterprise with CRM Customer Experience, Customer Loyalty, Customer Relationships, Customer Life Cycle, Customer Value Management			
Customer-Responsive Enterprise with SCM Supply Chain Management, Customer-Responsive Management, B-Webs, Activity Costing techniques			
Renewing Enterprise with PLM Components and Advantages of PLM, Porter's Framework, Product Life Cycle			
Collaborative Enterprise with BPM BPM, BPR, Business Processes with SOA, Workflows, Analytics			
Informed Enterprise with BI Context-Aware Applications, Decision Patterns and Data mining			
Assessment Breakdown			%
Coursework			100.00%
Assessments			
Full Time			
Coursework			
Assessment Type:	Formative Assessment	% of total:	Non-Marked
Assessment Date:	n/a	Outcome addressed:	1,2,3,4
Non-Marked:	Yes		
Assessment Description: Formative assessment will be provided on the in-class individual or group activities. Feedback will be provided in written or oral format, or on-line through Moodle. In addition, in class discussions will be undertaken as part of the practical approach to learning.			
Assessment Type:	Continuous Assessment	% of total:	20
Assessment Date:	Week 8	Outcome addressed:	3
Non-Marked:	No		
Assessment Description: Multiple-Choice Questions, similar to Industry Certification exams			
Assessment Type:	Project	% of total:	80
Assessment Date:	Week 12	Outcome addressed:	1,2,3,4
Non-Marked:	No		
Assessment Description: Analyse Requirements, Design and Implement an end-to-end BI and Analytics system for an organisation.			
No End of Module Assessment			
No Workplace Assessment			
Reassessment Requirement			
Coursework Only <i>This module is reassessed solely on the basis of re-submitted coursework. There is no repeat written examination.</i>			
Reassessment Description The repeat strategy for this module is by repeat assessment/project that covers all learning outcomes.			

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Module Workload				
Module Target Workload Hours 0 Hours				
Workload: Full Time				
Workload Type	Workload Description	Hours	Frequency	Average Weekly Learner Workload
Lecture	Classroom & Demonstrations (hours)	24	Every Week	24.00
Tutorial	Other hours (Practical/Tutorial)	12	Every Week	12.00
Independent Learning	Independent learning (hours)	89	Every Week	89.00
Total Weekly Contact Hours				36.00

Module Resources	
<i>Recommended Book Resources</i>	
Vivek Kale, Enhancing Enterprise Intelligence: Leveraging ERP, CRM, SCM, PLM, BPM, and BI (CRC Press).	
<i>Supplementary Book Resources</i>	
<p>Dean Abbott, Applied BI and Consumer Relationship Analytics: Principle and Techniques for the Professional Data Analyst (Wiley, 2014)..</p> <p>John W. Foreman, Data Smart: Using Data Science to Transform Information into Insight (Wiley, 2013)..</p> <p>Gordon S. Linoff and Michael J. A. Berry, Data Mining Techniques: For Marketing, Sales, and Customer Relationship Management (Wiley, 2011).</p> <p>John D. Kelleher, Brian Mac Namee, and Aoife D'Arcy, Fundamentals of Machine Learning for BI and Consumer Relationship Data Analytics: Algorithms, Worked Examples, and Case Studies (The MIT Press, 2015)..</p> <p>Albrecht, K. The Power of Minds at Work: Organizational Intelligence in Action, Amazon, 2003..</p> <p>Bell, S. Lean Enterprise Systems: Using IT for Continuous Improvement, Wiley, 2006..</p> <p>Davis, F. W. and K. B. Mandrodt, Customer-Responsive Management: The Flexible Advantage, Blackwell, 1996..</p> <p>Dove, R. Response Ability: The Language, Structure, and the Culture of the Agile Enterprise, Wiley, 2001..</p> <p>Koren, Y. The Global Manufacturing Revolution: Product-Process-Business Integration and Reconfigurable Systems, Wiley, 2010..</p> <p>Nightingale, D. J. and D. H. Rhodes, Architecting the Future Enterprise, MIT Press, 2015..</p> <p>Shtub, A. and R. Karni, ERP: The Dynamics of Supply Chain and Process Management, Springer, 2010..</p> <p>Walker, W. T. Supply Chain Architecture: A Blueprint for Networking the Flow of the Material, Information, and Cash, CRC Press, 2005..</p> <p>Waltz, E. Knowledge Management in the Intelligent Enterprise, Artech House, 2003..</p> <p>Weijermars, R. Building Corporate IQ: Moving the Energy Business from Smart to Genius, Executive Guide to Preventing Costly Crises, Springer, 2011..</p>	
<i>This module does not have any article/paper resources</i>	
<i>This module does not have any other resources</i>	
Discussion Note:	