

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 |

H9BIBA: Business Intelligence and Business Analytics

| 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. | | | |

H9BIBA: Business Intelligence and Business Analytics

| 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: | |