Unit Outline (Higher Education)

Institute / School:	Institute of Innovation, Science & Sustainability
Unit Title:	Business Intelligence & Data Warehousing
Unit ID:	ITECH7406
Credit Points:	15.00
Prerequisite(s):	(ITECH5007 or ITECH5402)
Co-requisite(s):	Nil
Exclusion(s):	Nil
ASCED:	029999

Description of the Unit:

This unit introduces you to business intelligence and data warehousing techniques used to analyse enterprise data sets. Topics you may be exploring include theories and principles of data warehousing, business intelligence basics, value of DW and BI, relationship between DW and BI, DW architecture, DW types, designs and characteristics, BI model development, BI tools and technologies, data modelling, metadata and source data, data conversion, migration and storage, data quality issues, data mining, data marts, and online analytical processing. You will be applying these skills and knowledge to be able to report on insights and predicted behaviours, supporting end user/client decision making.

Grade Scheme:	Graded (HD, D, C, P, MF, F, XF)

Work Experience:

No work experience

Placement Component:	No

Supplementary Assessment: Yes

Where supplementary assessment is available a student must have failed overall in the Unit but gained a final mark of 45 per cent or above, has completed all major assessment tasks (including all sub-components where a task has multiple parts) as specified in the Unit Description and is not eligible for any other form of supplementary assessment.

Course Level:

Level of Unit in Course	AQF Level of Course					
	5	6	7	8	9	10
Introductory						
Intermediate						
Advanced					✔	

Learning Outcomes:

Knowledge:

K1. Differentiate between the the various applications and scope of different technologies within a business intelligence system context.

K2. Critique the major approaches to the development of business intelligence and reporting systems.

K3. Compare and contrast the architecture and related processes of data warehousing and BI systems.

K4. Explain the potential benefit of data warehousing and business intelligence.

K5. Investigate and summarise the future trends of business intelligence and data warehousing.

Skills:

S1. Apply business intelligence techniques using an industry standard approach to explore, extract and analyse enterprise data sets.

S2. Use complex multi-dimensional databases.

S3. Design and develop BI dashboard according to requirements on business performance management.

Application of knowledge and skills:

A1. Apply data analytics techniques to gain insights, predict behaviours and generate value from data.

A2. Communicate and foster realistic expectations of the role of technology and business intelligence systems in management and decision support.

A3. Adopt problem solving and decision making strategies to effectively report solutions with key stakeholders for a variety of issues relating to data warehousing and business intelligence solutions.

Unit Content:

Business intelligence (BI) basics.
Business performance management
Value of DW and BI.
Relationship between DW and BI.
DW architecture.
DW types, designs and characteristics.
BI model development.
BI tools and technologies.
Data Modelling.
Data conversion, migration and storage.
Data quality issues.
Online analytical processing (OLAP).
Trends in BI area.

FEDTASKS

Federation University Federation recognises that students require key transferable employability skills to prepare them for their future workplace and society. FEDTASKS (**T**ransferable **A**ttributes **S**kills and **K**nowledge) provide a targeted focus on five key transferable Attributes, Skills, and Knowledge that are be embedded within curriculum, developed gradually towards successful measures and interlinked with cross-discipline and Co-operative Learning opportunities. *One or more FEDTASK, transferable Attributes, Skills or Knowledge must be evident in the specified learning outcomes and assessment for each FedUni Unit, and all must be directly assessed in each Course.*

FEDTASK attribute and descriptor		Development and acquisition of FEDTASKS in the Unit	
		Learning Outcomes (KSA)	Assessment task (AT#)
FEDTASK 1 Interpersonal	Students at this level will demonstrate an advanced ability in a range of contexts to effectively communicate, interact and work with others both individually and in groups. Students will be required to display high level skills in-person and/or online in: • Using and demonstrating a high level of verbal and non-verbal communication • Demonstrating a mastery of listening for meaning and influencing via active listening • Demonstrating and showing empathy for others • High order skills in negotiating and conflict resolution skills\\ • Demonstrating mastery of working respectfully in cross-cultural and diverse teams.	Not applicable	Not applicable
FEDTASK 2 Leadership	Students at this level will demonstrate a mastery in professional skills and behaviours in leading others. • Creating and sustaining a collegial environment • Demonstrating a high level of self -awareness and the ability to self-reflect and justify decisions • Inspiring and initiating opportunities to lead others • Making informed professional decisions • Demonstrating initiative in new professional situations.	Not applicable	Not applicable
FEDTASK 3 Critical Thinking and Creativity	Students at this level will demonstrate high level skills in working in complexity and ambiguity using the imagination to create new ideas. Students will be required to display skills in: • Reflecting critically to generate and consider complex ideas and concepts at an abstract level • Analysing complex and abstract ideas, concepts and information • Communicate alternative perspectives to justify complex ideas • Demonstrate a mastery of challenging conventional thinking to clarify complex concepts • Forming creative solutions in problem solving to new situations for further learning.	Not applicable	Not applicable
FEDTASK 4 Digital Literacy	Students at this level will demonstrate the ability to work competently across a wide range of tools, platforms and applications to achieve a range of tasks. Students will be required to display skills in: • Mastering, exploring, evaluating, managing, curating, organising and sharing digital information professionally • Collating, managing complex data, accessing and using digital data securely • Receiving and responding professionally to messages in a range of professional digital media • Contributing competently and professionally to digital teams and working groups • Participating at a high level in digital learning opportunities.	Not applicable	Not applicable

FEDTASK attribute and descriptor		Development and acquisition of FEDTASKS in the Unit	
		Learning Outcomes (KSA)	Assessment task (AT#)
FEDTASK 5 sustainable and Ethical Mindset	Students at this level will demonstrate a mastery of considering and assessing the consequences and impact of ideas and actions in enacting professional ethical and sustainable decisions. Students will be required to display skills in: • Demonstrate informed judgment making that considers the impact of devising complex solutions in ambiguous global economic environmental and societal contexts • Professionally committing to the promulgation of social responsibility • Demonstrate the ability to evaluate ethical, socially responsible and/or sustainable challenges and generating and articulating responses • Communicating lifelong, life-wide and life-deep learning to be open to the diverse professional others • Generating, leading and implementing required actions to foster sustainability in their professional and personal life	Not applicable	Not applicable

Learning Task and Assessment:

Learning Outcomes Assessed	Assessment Tasks	Assessment Type	Weighting
K1, K2, K3, K4, K5, S1, S2, S3, A1, A2, A3	Investigate the practice, approaches and understanding of business intelligence as it is being applied in the real world to realise organisational objectives. Work in groups to solve a business intelligence problem, requiring selecting and analysing a data set, visualising the results, and designing and developing a BI dashboard for a range of stakeholders.	Assignment(s)	50%-70%
A2, A3	Students will present their data analysis work to related stakeholders in a simulated workplace context. Students will also self-reflect their learning journey, achievements, and lessons learnt.	Presentation and Reflection	10%-30%
K1, K2, K3, K4, K5, S1, A3	Review and practice of skills and knowledge.	Quiz/test	10%-20%

Adopted Reference Style:

APA ()

Refer to the library website for more information

Fed Cite - referencing tool