



Unit Outline (Higher Education)

Institute / School:	Institute of Innovation, Science & Sustainability
Unit Title:	Real Time Analytics
Unit ID:	ITECH7407
Credit Points:	15.00
Prerequisite(s):	(ITECH5402)
Co-requisite(s):	Nil
Exclusion(s):	Nil
ASCED:	029999

Description of the Unit:

This unit builds upon previous units to cover the principles, methodologies, applications and management of real time big data sets, including related data analytical methods, as used in enterprise environments. You will engage in researching a business case, applying predictive and real time analytics to big data sets to achieve meaningful insights into data in rapidly changing environments.

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						

Level of Unit in Course	AQF Level of Course					
	5	6	7	8	9	10
Intermediate	■	■	■	■	■	■
Advanced	■	■	■	■	✓	■

Learning Outcomes:

Knowledge:

- K1.** Examine the principles, methodologies and applications of real time systems in diverse domains.
- K2.** Identify and explain the architectural components of real time systems.
- K3.** Communicate the key drivers for big data in terms of efficiency, productivity, revenue and profitability to global organisations.
- K4.** Distinguish and describe types of big data, and analyse its differences from other types of data.
- K5.** Investigate and critique various technologies used to support real time systems, big data analytics including mobile specific data.

Skills:

- S1.** Integrate data warehouse and business intelligence techniques when using big data.
- S2.** Create flexible analytical models based on real time data, and use connectivity interfaces and tools for reporting purposes.
- S3.** Use real time performance analysis techniques to monitor data, and identify shifts or events occurring in data, as a basis for organisational decision making.

Application of knowledge and skills:

- A1.** Assess real-time big data systems for security, compliance, auditing, and protection.
- A2.** Evaluate and implement problem solving and decision making strategies to communicate solutions to organisational problems with key stakeholders, based on analysis of big data, in real time settings.

Unit Content:

Real time systems and technologies.

Big data basics.

Industry examples of big data.

Big data technologies.

Information management.

Business analytics.

Real time analytics.

Security, compliance, auditing and protection of big data.

New trends in the area of real time analytics.

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**tttributes **S**kills and **K**nowledge) provide a targeted focus on five key transferable Attributes, Skills, and Knowledge that are 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: <ul style="list-style-type: none"> 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. <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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 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: <ul style="list-style-type: none"> 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	As part of a team, apply advanced data analysis techniques to a real-world business case and associated complex dataset using a software tool. Review, select, and apply effective analysis techniques using designated software. Justify selections, with reference to the given business problem. Design a dashboard for key findings, and formulate meaningful and logical CEO recommendations. Align recommendations with operational and strategic objectives, justifying impacts on business processes and strategic positioning.	Assignment(s)	50% - 70 %
A1, A2	Following the case study analysis, present research findings to stakeholders in a simulated workplace context. Justify each recommendation comprehensively, demonstrating depth of understanding of how the proposed actions may positively impact business processes. Engage in self-reflection, documenting your learning journey, achievements, lessons learned, and other relevant aspects.	Presentation and self reflection	20% - 30%
K1, K2, K3, K4, S1, S2	Review and practice of skills and knowledge.	Quiz and test	10% - 20%

Adopted Reference Style:

APA ()

 Refer to the [library website](#) for more information

 Fed Cite - [referencing tool](#)