



# Unit Outline (Higher Education)

**Institute / School:** Institute of Innovation, Science & Sustainability

**Unit Title:** DATA ANALYTICS AND DECISION MAKING

**Unit ID:** ENGIN5207

**Credit Points:** 15.00

**Prerequisite(s):** Nil

**Co-requisite(s):** Nil

**Exclusion(s):** Nil

**ASCED:** 039999

**Description of the Unit:**

This unit provides students with an understanding of the use of IT systems for business and data analysis. Students will learn the principles of business analytics in an organisational context. A number of commonly used tools and techniques for data and information analysis will be explored.

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

**Work Experience:**

No work experience: Student is not undertaking work experience in industry.

**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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intermediate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>
Advanced	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Learning Outcomes:**
**Knowledge:**

- K1.** Explore the nature of management work and how this affects decision making and problem solving systems.
- K2.** Describe stakeholder requirements and infer appropriate data analytical tools.

**Skills:**

- S1.** Evaluate major approaches of IT based decision support systems
- S2.** Select the appropriate decision support approach utilising the available analytical tools.

**Application of knowledge and skills:**

- A1.** Critically assess a system analysis for the management of projects.
- A2.** Apply business process analysis for decision making and record keeping.

**Unit Content:**

Topics may include:

- Principles of business data analytics
- Organisational context of business and nature of problems
- Systems analysis for organisational problem solving
- Data warehousing and big data
- Tools and techniques for data and information analysis
- Elicitation of stakeholder requirements
- Sociotechnical theory in the context of business analysis

**Learning Task and Assessment:**

Learning Outcomes Assessed	Assessment Tasks	Assessment Type	Weighting
K1-2, S1-2, A1-2	Questions and problems relating to the principles of business analytics.	Assignment	20 - 40%
K1-2, S1-2, A1-2	Group work on data analysis and problem solving in business.	Assignment	20 - 40%
K1-2, S1-2, A1-2	A combination of quantitative and qualitative problems.	Examination	40 - 60%

**Adopted Reference Style:**

Other (IEEE)

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

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