



# Course Outline (Higher Education)

<b>School:</b>	School of Engineering, Information Technology and Physical Sciences
<b>Course Title:</b>	DATA ANALYTICS AND DECISION MAKING
<b>Course ID:</b>	ENGIN5207
<b>Credit Points:</b>	15.00
<b>Prerequisite(s):</b>	Nil
<b>Co-requisite(s):</b>	Nil
<b>Exclusion(s):</b>	Nil
<b>ASCED:</b>	039999

**Description of the Course:**

This course 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 course but gained a final mark of 45 per cent or above and submitted all major assessment tasks.

**Program Level:**

Level of course in Program	AQF Level of Program					
	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.

**Course 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

**Values:**

- V1.** Recognise the versatility of information analysis in decision making.
- V2.** Appreciate the importance of data collection, management and analysis in successful delivery of projects.

**Graduate Attributes**

The Federation University FedUni graduate attributes (GA) are entrenched in the [Higher Education Graduate Attributes Policy](#) (LT1228). FedUni graduates develop these graduate attributes through their engagement in explicit learning and teaching and assessment tasks that are embedded in all FedUni programs. Graduate attribute attainment typically follows an incremental development process mapped through program progression. **One or more graduate attributes must be evident in the specified learning outcomes and assessment for each FedUni course, and all attributes must be directly assessed in each program**

Graduate attribute and descriptor		Development and acquisition of GAs in the course	
		Learning Outcomes (KSA)	Assessment task (AT#)
GA 1 Thinkers	Our graduates are curious, reflective and critical. Able to analyse the world in a way that generates valued insights, they are change makers seeking and creating new solutions.	K1,K2,S1,S2,A1,A2	1-3

Graduate attribute and descriptor		Development and acquisition of GAs in the course	
		Learning Outcomes (KSA)	Assessment task (AT#)
GA 2 Innovators	Our graduates have ideas and are able to realise their dreams. They think and act creatively to achieve and inspire positive change.	K1,K2,S1,S2,A1	1-3
GA 3 Citizens	Our graduates engage in socially and culturally appropriate ways to advance individual, community and global well-being. They are socially and environmentally aware, acting ethically, equitably and compassionately.	K1,K2,S2,A1	1-3
GA 4 Communicators	Our graduates create, exchange, impart and convey information, ideas, and concepts effectively. They are respectful, inclusive and empathetic towards their audience, and express thoughts, feelings and information in ways that help others to understand.	K2,A1,A2	1-3
GA 5 Leaders	Our graduates display and promote positive behaviours, and aspire to make a difference. They act with integrity, are receptive to alternatives and foster sustainable and resilient practices.	K1,K2,S1,S2,A1,A2	1-3

### Learning Task and Assessment:

Learning Outcomes Assessed	Learning 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

Fed Cite - [referencing tool](#)