



Unit Outline (Higher Education)

Institute / School:	Institute of Innovation, Science & Sustainability
Unit Title:	Analytics Project 1
Unit ID:	MATHS3002
Credit Points:	15.00
Prerequisite(s):	(MATHS2016 or STATS2101)
Co-requisite(s):	Nil
Exclusion(s):	Nil
ASCED:	010101

Description of the Unit:

This unit provides students with opportunities to apply the theoretical aspects of their mathematics and analytics studies in a practical application. The student chooses a problem to solve in conjunction with a supervisor from the academic staff.

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	■	■	■	■	■	■

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

Learning Outcomes:

Knowledge:

- K1.** Identify the processes and methodologies for problem solving or data analysis.
- K2.** Recognise how to plan the presentation of technical information to suit an audience.
- K3.** Define a particular problem and identify appropriate techniques for its analysis or solution.

Skills:

- S1.** Compile information related to the problem.
- S2.** Combine techniques or practical analytical skills beyond those acquired in other units.
- S3.** Collaborate with a supervisor and team members if applicable.
- S4.** Translate results of the project in written and oral forms to specialist and general academic audiences.

Application of knowledge and skills:

- A1.** Justify the analytical techniques selected.
- A2.** Produce a written report on the results of the analysis or computation.

Unit Content:

This unit will provide students with an opportunity to undertake a significant work project based on their prior study in mathematics and statistics. The unit coordinator may allow a team of students to work collaboratively on a project. Each project will have an allocated supervisor. The main emphasis will be on understanding the problem, being aware of the context of the problem, constructing a strategy for solution and communicating the results. The supervisor and unit coordinator will provide guidance in terms of major milestones to help students plan and manage their project. Students may propose their own topic with the agreement of the Unit Coordinator, provided the project is appropriate in scope and level of technical difficulty and the student has secured a supervisor.

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 attribute and descriptor		Development and acquisition of FEDTASKS in the Unit	
		Learning Outcomes (KSA)	Assessment task (AT#)
FEDTASK 1 Interpersonal	Students will demonstrate the ability to effectively communicate, inter-act and work with others both individually and in groups. Students will be required to display skills in-person and/or online in: <ul style="list-style-type: none"> Using effective verbal and non-verbal communication Listening for meaning and influencing via active listening Showing empathy for others Negotiating and demonstrating conflict resolution skills Working respectfully in cross-cultural and diverse teams. 	Not applicable	Not applicable
FEDTASK 2 Leadership	Students will demonstrate the ability to apply professional skills and behaviours in leading others. Students will be required to display skills in: <ul style="list-style-type: none"> Creating a collegial environment Showing self-awareness and the ability to self-reflect Inspiring and convincing others Making informed decisions Displaying initiative 	Not applicable	Not applicable
FEDTASK 3 Critical Thinking and Creativity	Students will demonstrate an ability to work 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 Evaluating ideas, concepts and information Considering alternative perspectives to refine ideas Challenging conventional thinking to clarify concepts Forming creative solutions in problem solving. 	Not applicable	Not applicable
FEDTASK 4 Digital Literacy	Students will demonstrate the ability to work fluently across a 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"> Finding, evaluating, managing, curating, organising and sharing digital information Collating, managing, accessing and using digital data securely Receiving and responding to messages in a range of digital media Contributing actively to digital teams and working groups Participating in and benefiting from digital learning opportunities. 	Not applicable	Not applicable
FEDTASK 5 Sustainable and Ethical Mindset	Students will demonstrate the ability to consider and assess the consequences and impact of ideas and actions in enacting ethical and sustainable decisions. Students will be required to display skills in: <ul style="list-style-type: none"> Making informed judgments that consider the impact of devising solutions in global economic environmental and societal contexts Committing to social responsibility as a professional and a citizen Evaluating ethical, socially responsible and/or sustainable challenges and generating and articulating responses Embracing lifelong, life-wide and life-deep learning to be open to diverse others 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, S1	Present an initial formulation of the problem.	Oral presentation	5-30%
K1, K3, S1, S2, S3, S4, A1, A2	Preparation of a report detailing the problem and its context, mathematical or statistical techniques used, demonstrating the application of those techniques and communicating the results or solution of the problem within the given context.	Written report	40 - 80%
K2, S4, A1	Give a 15 - 30 minute oral presentation summarising the problem and solution or analysis that has been performed.	Oral presentation	10 - 40%

Adopted Reference Style:

Australian Harvard ()

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

Fed Cite - [referencing tool](#)