



# Unit Outline (Higher Education)

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

**Unit Title:** Engineering Project Management Theory

**Unit ID:** ENGIN5205

**Credit Points:** 15.00

**Prerequisite(s):** Nil

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

**Exclusion(s):** Nil

**ASCED:** 039999

**Description of the Unit:**

This course adopts a holistic view of engineering project management theory, considering issues throughout a project life cycle. It considers the project responsibilities of engineering managers and organisations, from the definition phase of a project to its conclusion. The perspective of stakeholders, particularly the project manager, are considered. The emphasis is interdisciplinary and relevant to all fields of engineering practice.

**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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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.** Evaluate modern project management theory and demonstrate relevant practice techniques.
- K2.** Formulate the scope for a project that would be suitable to satisfy stakeholder needs.
- K3.** Discuss issues in project management practices with regard to building clients and stakeholders' requirements

#### Skills:

- S1.** Analyse the application of project management tools and techniques to meet complex contextual demands in different sectors.
- S2.** Evaluate, analyse and integrate professional approaches to managing projects within sector specialisations
- S3.** Reflect and participate constructively in the selection of consultants, contractors and resources.

#### Application of knowledge and skills:

- A1.** Recognition of the importance of choosing the most relevant management strategy.
- A2.** Analyse the utilisation of the latest management tools and techniques for effective and efficient implementation and completion of projects.
- A3.** Identify key issues in management systems and control with regard to quality management

#### Unit Content:

Topics will include: Modern Project Management theory and practices  
 Scope management  
 Development of acquisition strategies  
 Managing project teams  
 Selection of consultant and contractors  
 Progress and performance  
 Communication processes  
 Project measurement, evaluation, and closure

#### 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"> <li>• Using and demonstrating a high level of verbal and non-verbal communication</li> <li>• Demonstrating a mastery of listening for meaning and influencing via active listening</li> <li>• Demonstrating and showing empathy for others</li> <li>• High order skills in negotiating and conflict resolution skills</li> <li>• Demonstrating mastery of working respectfully in cross-cultural and diverse teams.</li> </ul>	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"> <li>• Creating and sustaining a collegial environment</li> <li>• Demonstrating a high level of self-awareness and the ability to self-reflect and justify decisions</li> <li>• Inspiring and initiating opportunities to lead others</li> <li>• Making informed professional decisions</li> <li>• Demonstrating initiative in new professional situations.</li> </ul>	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"> <li>• Reflecting critically to generate and consider complex ideas and concepts at an abstract level</li> <li>• Analysing complex and abstract ideas, concepts and information</li> <li>• Communicate alternative perspectives to justify complex ideas</li> <li>• Demonstrate a mastery of challenging conventional thinking to clarify complex concepts</li> <li>• Forming creative solutions in problem solving to new situations for further learning.</li> </ul>	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"> <li>• Mastering, exploring, evaluating, managing, curating, organising and sharing digital information professionally</li> <li>• Collating, managing complex data, accessing and using digital data securely</li> <li>• Receiving and responding professionally to messages in a range of professional digital media</li> <li>• Contributing competently and professionally to digital teams and working groups</li> <li>• Participating at a high level in digital learning opportunities.</li> </ul>	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"> <li>• Demonstrate informed judgment making that considers the impact of devising complex solutions in ambiguous global economic environmental and societal contexts</li> <li>• Professionally committing to the promulgation of social responsibility</li> <li>• Demonstrate the ability to evaluate ethical, socially responsible and/or sustainable challenges and generating and articulating responses</li> <li>• Communicating lifelong, life-wide and life-deep learning to be open to the diverse professional others</li> <li>• Generating, leading and implementing required actions to foster sustainability in their professional and personal life</li> </ul>	Not applicable	Not applicable

### Learning Task and Assessment:

Learning Outcomes Assessed	Assessment Tasks	Assessment Type	Weighting
K1, K2, S1, A1	Problem based questions and design tasks pertinent to engineering projects.	Assignment	20 - 40%
K1, K2, K3, S1, S2, A1, A2	Development of a project management plan using Microsoft Project software	Computer simulation project	30 - 50%
K1, K2, K3, S1, S2, S3, A1, A2, A3	A combination of quantitative and qualitative problem solving, design calculations and critical analysis of time and communication management.	Assignment or project report(s).	20 - 40%

**Adopted Reference Style:**

Other (IEEE)

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

Fed Cite - [referencing tool](#)