

MEM60122 – Advanced Diploma of Engineering

This qualification consists of **7 core** and **23 elective** competencies. You are required to complete all seven (7) core units, up to eight (8) Group A elective units, and at least fifteen (15) specialist elective units from Group B. On successful completion of all **30 units**, you will receive an **Advanced Diploma of Engineering**. *Students should NOT enrol in to more than one unit at a time, unless otherwise advised.* For distance enrolments, you will have up to six months to complete each unit from the date of enrolment. For On Campus enrolments; either 15 weeks, or 25 weeks per unit. No classroom time is required for twenty (20) of the thirty (30) units required to complete the full qualification. At this time the remaining ten (10) units must be completed in full or part time mode at Acacia Ridge.

POS (Preferred Order of Study) - The first column is the recommended order of study

- The second column marks units that can be done anytime outside of the recommended order of study as long as pre-requisites are met and they are completed in marked order (1-4)

POS		Unit Code	Unit Name	Pre-requisite	Unit Type	Duration		Location			
						On Campus	Distance	Acacia Ridge	Bracken Ridge	Eagle Farm	Distance
		Enrol into one unit at a time, unless approved by teacher				On Campus	Distance	Acacia Ridge	Bracken Ridge	Eagle Farm	Distance
1		MEM13015	Work safely and effectively in manufacturing and engineering		Elective A/B	15 weeks	6 months (eLearning)	✓	✓	✓	✓
2	● (1)	MEM09229	Read and interpret technical engineering drawings		Elective A	15 weeks		✓	✓	✓	✓
3		MEM16006	Organise and communicate information	MEM13015	Core	15 weeks		✓	✓	✓	✓
4		MEM12023	Perform engineering measurements	MEM13015, MEM16006	Elective A	15 weeks		✓	✓	✓	✓
5		MEM16008	Interact with computing technology	MEM13015, MEM16006	Core	15 weeks		✓	✓	✓	✓
6	● (2)	MEM30031	CAD system basic draw element		Elective A	15 weeks		✓	✓	✓	✓
7	● (3)	MEM30033	Use CAD create display 3D models	MEM30031	Elective A	15 weeks		✓	✓	✓	✓
8	● (4)	MEM30032	Produce basic engineering draw		Elective A	25 weeks		✓	✓	✓	✓
9		MEM09204	Produce basic engineering detail drawings	MEM09229 MEM30031A* MEM30032A* MEM30033A*	Elective B	25 weeks		✓	✓	✓	✓
10		MEM12024	Perform computations	MEM13015, MEM16006	Elective A	15 weeks		✓	✓	✓	✓

* It is a requirement by TAFE faculty that units MEM30031, MEM30032 and MEM30033 are completed prior to undertaking unit MEM09204.

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POS	Unit Code	Unit Name	Pre-requisite	Unit Type	Duration		Location				
					On Campus	Distance	Acacia Ridge	Bracken Ridge	Eagle Farm	Distance	
		Enrol into one unit at a time, unless approved by teacher									
11	MEM30012	Apply mathematical techniques in a manufacturing engineering or related environment	MEM12024*	Core	25 weeks	6 months (eLearning)	✓	✓	✓	✓	
12	MEM12025	Use graphical techniques and perform simple statistical computations	MEM13015, MEM16006, MEM12024	Elective B						✓	
13	MEM23004	Apply technical mathematics		Elective B			✓			✓	
14	MEM23109	Apply engineering mechanics principles	MEM23004	Elective B			✓			✓	
15	MEM30006	Calculate stresses in simple structures	MEM30012	Elective A						✓	
16	MEM30005	Calculate force systems within simple beam structures	MEM30012	Elective A						✓	
17	MEM30007	Select common engineering materials		Core						✓	
18	MEM22002	Manage self in the engineering environment	MEM16006	Core						✓	
19	MEM22001	Manage self in the engineering environment	MEM16006	Core						✓	
20	MSMENV272	Participate in environmentally sustainable work practices		Core	15 weeks		✓	✓	✓	✓	

* It is a requirement by TAFE faculty that unit MEM12024 is completed prior to undertaking unit MEM30012.

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POS	Unit Code	Unit Name	Pre-requisite	Unit Type	Duration		Location					
					On Campus	Distance	Acacia Ridge	Bracken Ridge	Eagle Farm	Distance		
		Enrol into one unit at a time, unless approved by teacher					On Campus	Distance	Acacia Ridge	Bracken Ridge	Eagle Farm	Distance
21	MEM22013	Coordinate engineering projects	MEM16006	Elective B	Full/Part Time			✓				
Please choose 9 electives to complete from the list below. The 9 units can be completed in any order after the previous 21 units have been completed:												
	MEM09155	Prepare mechanical models for computer-aided engineering (CAE)	MEM23004, MEM23109	Elective B	Full/Part Time	6 months (eLearning)		✓				
	MEM09157	Perform mechanical engineering design drafting		Elective B	Full/Part Time			✓				
	MEM14085	Apply mechanical engineering analysis techniques	MEM23004, MEM23109	Elective B	Full/Part Time			✓				
	MEM23003	Operate and program computers and/or controllers in engineering situations	MEM16006, MEM16008	Elective B	Full/Part Time			✓				
	MEM23006	Apply fluid and thermodynamics principles in engineering	MEM23004	Elective B	Full/Part Time			✓				
	MEM23007	Apply calculus to engineering tasks	MEM23004	Elective B	Full/Part Time			✓				
	MEM23063	Select and organise mechanical engineering material tests	MEM23004, MEM23109	Elective B	Full/Part Time			✓				
	MEM23114	Evaluate thermodynamic systems and components	MEM23004, MEM23006	Elective B	Full/Part Time			✓				
	MEM23120	Select mechanical machine and equipment components	MEM23004, MEM23109, MEM30005, MEM30006	Elective B	Full/Part Time			✓				
	MEM23123	Evaluate manufacturing processes		Elective B	Full/Part Time		✓					
	MEM30029	Use workshop equipment and processes to complete an engineering project	MEM13015	Elective B	Full/Part Time		✓					