

Master of Engineering (Electrical and Electronic)

Mapping to Engineers Australia Professional Engineering Competencies

Listed below is the award's Program of Study and significant sequences/alternatives. Electives are generally not listed as students cannot be guaranteed to take specific topics. The "Worst Case" row indicates the pathological worst case in terms of sequences and electives.

		1. KNOWLEDGE AND SKILL BASE						2. ENGINEERING APPLICATION ABILITY				3. PROFESSIONAL AND PERSONAL ATTRIBUTES					
BLOOM'S REVISED TAXONOMY R = Remembering (Knowledge) U = Understanding (Comprehension) A = Applying N = Analysing E = Evaluating C = Creating (Synthesis)		1.1. Comprehensive, theory based understanding of the underpinning natural and physical sciences and the engineering fundamentals applicable to the engineering discipline.	1.2. Conceptual understanding of the, mathematics, numerical analysis, statistics, and computer and information sciences which underpin the engineering discipline.	1.3. In-depth understanding of specialist bodies of knowledge within the engineering discipline.	1.4. Discernment of knowledge development and research directions within the engineering discipline.	1.5. Knowledge of contextual factors impacting the engineering discipline.	1.6. Understanding of the scope, principles, norms, accountabilities and bounds of contemporary engineering practice in the specific discipline.	2.1. Application of established engineering methods to complex problem solving.	2.2. Fluent application of engineering techniques, tools and resources.	2.3. Application of systematic engineering synthesis and design processes.	2.4. Application of systematic approaches to the conduct and management of engineering projects.	3.1. Ethical conduct and professional accountability	3.2. Effective oral and written communication in professional and lay domains.	3.3. Creative, innovative and pro-active demeanour.	3.4. Professional use and management of information.	3.5. Orderly management of self, and professional conduct.	3.6. Effective team membership and team leadership.
Core Topic Code and Name		Sequence															
Masters																	
ENGR8771 Electronic Circuits GE (4.5 units)	Core	RUA	RUN	RUAC	RU											RUNE	
ENGR8772 Sensors and Actuators GE (4.5 units)	Core			RUA					RUA								
ENGR8802 Electrical Circuits and Machines GE (4.5 units)	Core			RUA										RUA		RUA	
ENGR8991 Electrical Engineering Principles GE (4.5 units)	Core	RUA	RUA								RUA						
ENGR9704 Engineering Management (4.5 units)	Core					RUA	RUA	RUA							RUN	RUA	RUA
ENGR9721 Control Systems GE (4.5 units)	Core		RU	RUANC				RU	RUA	RUAN							
ENGR9742 Systems Engineering (4.5 units)	Core					RUN	RUANE	RUANE		RUN		RUN	RU	RUAN	RUA	RUA	RUA
ENGR3750 Workplace Preparation (0 units)	WorkExp																
ENGR9700 Masters Thesis (18 units)	Thesis			RUN	RUNE	RUN		RUA				RUAC		RU	RUNE	RU	RUA
ENGR9710 Masters Project (9 units)	Project			RUN	RUAC			RUA				RUN		RUAC	RUN	RUAC	RUAC
ENGR9405 Engineering Work Experience (4.5 units)	WorkExp						RUNE	RUN				RUN		RUAC			RUAN
ENGR7762 Renewable Energy Systems (4.5 units)	Elec	RUN					RU										
ENGR7812 Power Electronics (4.5 units)	Elec	RUANC															
ENGR7821 Electrical Power Systems (4.5 units)	Elec	RUAN		RUN				RUNE									
ENGR9761 Electrical Energy Systems GE (4.5 units)	Elec			RUAN				RUA						RUA			
ENGR9861 Electromagnetics and Electromagnetic Wave	Elec	RU		RUA													
ENGR7731 Computer Architecture (4.5 units)	Electron			RUAN	RUANC												RUA
ENGR7851 Advanced Electronic Design (4.5 units)	Electron							RUAC	RUANE	RUA							RUA
ENGR9781 Computer Organisation and Design GE (4.5 u	Electron			RUA					RUAC	R	RUN						RUA
ENGR9821 Signal Processing GE (4.5 units)	Electron		RUA	RUA					RUA								
ENGR9831 Communication Systems GE (4.5 units)	Electron			RUAN													
ENGR7711 Advanced Control Systems (4.5 units)	RCV		R	RUAN					RUAC	RUA							
ENGR7712 Autonomous Systems (4.5 units)	RCV			RUANC	RUNE					RUN							RUA
ENGR7732 Instrumentation (4.5 units)	RCV			RU						RUN							RUA
ENGR7761 Computer Vision (4.5 units)	RCV	RUA	RUA	RUA						RUA							
ENGR8712 Automation and Industrial Control GE (4.5 un	RCV			RUN	RU			RU		RU	RU						
ENGR9771 Robotic Systems GE (4.5 units)	RCV			RUAN	RU												RUN
Count of Topics for which PE satisfied																	
Core		2	3	4	3	3	2	1	2	2	3	2	4	1	2	4	2
Elec		4	0	3	0	1	0	2	0	0	2	0	1	0	0	0	0
Electron		0	1	4	1	0	0	1	3	2	1	0	0	0	0	0	3
RCV		1	2	6	3	0	0	1	3	5	1	0	0	0	0	0	3
Thesis		0	0	1	1	1	0	1	0	0	1	0	1	1	1	1	0
Project		0	0	1	1	0	0	1	0	0	1	0	1	1	1	1	0
WorkExp		0	0	0	0	1	1	0	0	0	1	2	1	1	0	1	1
Worst Case Coverage		2 RUANC	3 RUAN	8 RUANC	4 RUANEC	4 RUANE	3 RUANE	3 RUANE	2 RUA	2 RUAN	6 RUANEC	4 RUAN	6 RUANC	3 RUANEC	3 RUAN	6 RUANEC	3 RUAN