Master of Engineering Practice M1330 (Smart and Renewable Electrical Power Systems Engineering)

Academic Chair: M.Calais@murdoch.edu.au **Start Date:** Semester 2 2025

Major: Smart and Renewable Electrical Power Systems Engineering
Minor: ***Engineering Design*** **(recommended for international students)**

	Semester 1 Units	CP	Semester 2 Units	CP
Year 1 – 2025			***ENG526 Postgraduate Engineering Skills and Tools***	3
			ENG543 Modelling and Systems Engineering	3
			ENG544 Engineering Sustainability	3
			ICT515 Foundations of Data Science	3
	Total		**Total**	12
Year 2 - 2026	**Semester 1 Units**	**CP**	**Semester 2 Units**	**CP**
	ENG532 Renewable Energy Resources and Technologies	3	ENG534 Power Systems Operation, Control and Protection	3
	Specified Elective or ***GRD503 Design Thinking Tools***	3	ENG538 Future Electricity Networks	3
	ENG537 Power System Modelling and Analysis	3	***ENG605 Design Project*** (H option)[1]	3
	ENG536 Electrical Machines in the Smart Grid era	3	***GRD503 Design Thinking Tools*** or Specified Elective	3
			ENG100 Engineering Professional Practice (H option)	0
	Total	12	**Total**	12
Year 3 - 2027	**Semester 1 Units**	**CP**	**Semester 2 Units**	**CP**
	ENG500 Finance, Management, Ethics and Law	3		
	ENG631 Distributed Power System and Microgrid Planning and Reliability	3		
	ENG605 Design Project (H option)[1]	3		
	ENG535 Power Electronics - Converters and Applications	3		
	ENG100 Engineering Professional Practice (H option)	0		
	Total	12	**Total**	

TOTAL CREDIT POINTS 48

Recommended Specified Electives
ENG553 Industrial Process Control (S1)
ENG552 Industrial Control Systems (S1)
ENG551 Microcontrollers and Data Communication (S1)
ENG570 Circular Economy and Innovation (S1)
ENG630 Hydrogen Systems (S2)
ICT606 Machine Learning (S1)
PEN504 Greenhouse Gas Reporting and Life Cycle Assessment (S2)
PEN594 Energy Auditing and Management (S1)
PEN600 Energy Storage (S2)
ENG526 Postgraduate Engineering Skills and Tools (S1, S2)
(Any other elective units are subject to approval from the Academic Chair)

[1] Students enrolling in the H-Option of ENG605 need to pay the full unit fee (6 cpts) at the commencement of the S2 2026 teaching period.

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Academic Chair: M.Calais@murdoch.edu.au **Start Date:** Semester 2 2025

Major: Smart and Renewable Electrical Power Systems Engineering
Minor: ***Engineering Research*** **(only available to students who can demonstrate an average 70% or greater WAM equivalent (2.8 GPA equivalent) during their first 24 cpts of study in the Master of Engineering Practice course, or alternatively can enrol with permission from the Academic Chair.)**

	Semester 1 Units	CP	Semester 2 Units	CP
Year 1 – 2025			ENG526 Postgraduate Engineering Skills and Tools (or Specified Elective with permission of the Academic Chair)	3
			ENG543 Modelling and Systems Engineering	3
			ENG544 Engineering Sustainability	3
			ICT515 Foundations of Data Science	3
	Total		**Total**	12
Year 2 - 2026	**Semester 1 Units**	**CP**	**Semester 2 Units**	**CP**
	ENG532 Renewable Energy Resources and Technologies	3	ENG534 Power Systems Operation, Control and Protection	3
	ENG536 Electrical Machines in the Smart Grid era	3	ENG538 Future Electricity Networks	3
	ENG537 Power System Modelling and Analysis	3	***ENG606 Thesis Project*** (H option)[2]	6
	ENG500 Finance, Management, Ethics and Law	3	ENG100 Engineering Professional Practice (H option)	0
	Total	12	**Total**	12
Year 3 - 2027	**Semester 1 Units**	**CP**	**Semester 2 Units**	**CP**
	ENG631 Distributed Power System and Microgrid Planning and Reliability	3		
	ENG606 Thesis Project (H option)	6		
	ENG535 Power Electronics - Converters and Applications	3		
	ENG100 Engineering Professional Practice (H option)	0		
	Total	12	**Total**	

TOTAL CREDIT POINTS 48

Please note: This course plan is a sample only and must be read in conjunction with the full course structure, unit prerequisites and enrolment options as outlined in the Handbook. Students should note that due to unit prerequisites, commencing study in Semester 2 may extend the duration of the course. This information is correct as at 06/06/2025.

[2] Students enrolling in the H-Option of ENG606 need to pay the full unit fee (12 cpts) at the commencement of the S2 2026 teaching period.