

Programme Matrix for Students Intake of AY2021-2022 until AY2024-2025

Programme Matrix	
Faculty	Engineering
Program	Mechanical and Mechatronic Engineering
Award	Bachelor of Engineering Mechanical and Mechatronic Engineering
Credit Unit/Hour	69 units/133 Credit Hours
Academic Year	2025-2026

Level	Semester 1						Semester 2					
	Course Code	Course Name	Pre-requisite	Core/Elective	Units	CHrs	Course Code	Course Name	Pre-requisite	Core/Elective	Units	CHrs
1	CHEM1020	General Chemistry	None	Core	2	4	ELEC1100	Principles of Electrical Circuits	None	Core	2	4
	COMP1500	Introduction to Programming	IC3M2	Core	2	4	ENGG1010	Applied Mechanics	None	Core	2	4
	ENGG1013	Engineering Drawing and Computer Drafting	None	Core	1	2	ENGG1023	Engineering Materials	None	Core	2	4
	MATH1000	Mathematical Foundations	SET3	Core	2	4	MATH1100	Calculus & Linear Algebra	MATH1000	Core	2	4
	UNIR1100	Communication Skills (1)	None	Core	2	3	UNIR1001	Oman and Islamic Culture	None	Core	1	2
2	MECH2118	Manufacturing Processes	ENGG1023	Core	2	4	METR2000	Fundamentals of Mechatronics	None	Core	2	4
	ELEC2113	Instrumentation & Measurement	ELEC1100	Core	2	4	MECH2108	Mechanical Drawing & Design Fundamentals	ENGG1013	Core	2	4
	MECH2308	Strength of Materials	ENGG1010	Core	2	4	MECH2413	Fundamentals of Fluid Mechanics	None	Core	2	4
	MATH2100	Calculus & Statistics	MATH1100	Core	2	4	UNIR2001	Entrepreneurship	None	Core	2	2
	UNIR1002	Arabic Language Skills	SET 1A	Core	1	2	UNIR2100	Communication Skills (2)	UNIR1100	Core	2	3
3	METR3200	Control Systems Engineering	None	Core	2	4	METR3013	Programmable Logic Controllers and Automation	None	Core	2	4

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	MECH3800	Non-destructive testing & Metrology	None	Core	2	4	MECH3313	Advanced Machine Design & Finite Elements	None	Core	2	4
	MECH3408	Heat Transfer	None	Core	2	4	MECH3508	Thermodynamics	None	Core	2	4
	ENGG3700	Numerical Analysis and Optimization	None	Core	2	4	UNIR3100	Communication Skills (3)	UNIR2100	Core	2	3
<b>4</b>	MECH4213	Robot Dynamics and Mechanical Vibrations	None	Core	2	4	MECH4513	Refrigeration & Heat Engines	MECH3508	Core	2	4
	MECH4913	Design Project A	None	Core	2	4	MECH4914	Design Project B	None	Core	2	4
	METR4913	Computer Vision and Image Processing	None	Core	2	4	MECH4012	Advanced Manufacturing Technology	MECH2118	Core	2	4
	ENGG4801A	Final Year Project (A)	None	Core	2	4	ENGG4801B	Final Year Project (B)	ENGG4801A	Core	2	4