Mechatronics Engineering

Prog.	Year	Course Code	Course Name	Prerequisites	Category						
					X	Y	Z	M	J	K	L
Bachelor of Technology Honours in Engineering Degree / Higher Diploma in Technology	1	MPZ3231	Engineering Mathematics IA	None			6				
		MPZ3132	Engineering Mathematics IB	MPZ3231(CR)			3				
		ECX3210	Electro Techniques	MPZ3231(CR)	6						
		MEX3211	Communicating Engineering Information	None	6						
		MEX3235	Thermo-fluids	None	6						
		MEX3272	Applied electronics	MPZ3231(CR), ECX3210(CR)	6						
		MEX3273	Modeling of mechatronics systems	MPZ3231(CR), ECX3210(CR)	6						
		MEX3174	Principles of design	None	3						
		MEK3170	C Programming	None						3	
	2	MPZ4230	Engineering Mathematics II	MPZ3231(EL), MPZ3132(EL)			6				
		MEX4271	Sensors and actuators	MPZ3231(EL), MEX3272(EL), MEX3273(EL)	6						
		MEX4272	Vibration and fault diagnosis	MPZ3231(EL), MPZ3132(EL), MEX4335(CR)	6						
		MEX4273	Mechatronics product design	MEX3273(EL), MEX3174(EL), MEX4271(CR)	6						
		ECX4236	Microprocessors and interfacing	ECX3210(P), MPZ3231(P), MEX3211(P), [(ECX3233(EL) and {ECX3150(EL) and ECX4150(CR)}) or ECX3234(EL) or MEX3272(EL)]	6						
		MEX4243	Controls system engineering	MPZ4230(CR), ECX3210(P), MEX3212(P) or MEX3235(P), MEX3211(P), MPZ3231(P), MPZ3132(P) and pass in further 18 credits	6						
		MEX4335	Applied Mechanics & Strength of Materials	MPZ3231(EL)	9						
	Minimum credits for the Higher Diploma in Technology				**90**	**60¹**	**0**	**9**	**0**	**0**	**0**	**0**
	3	MPZ5230	Engineering Mathematics III	MPZ3231(P),MPZ3132(P),MPZ4230(EL)			6				
		MEX5270	Power electronics & motor drives	MEX3272(P), MEX4271(EL)	6						
		MEX5271	Machine vision	MEX4271(EL), MPZ4230(EL)	6						
		MEX5272	Materials & manufacturing technology	MEW3001(P), MEX4335(EL)	6						
		MEX5233	Dynamics of mechanical systems	MEX4275(EL) or MEX4335(EL), MPZ4230(EL)	6						
	4	MEX6270	Factory Automation	Pass in 72 Credits in X category	6						
		MEX6271	Robotics	MPZ5230(EL),[MEX3274(P) or MEX4271(P)], MEX5233(EL)	6						
		MEX6273	Advanced Control Engineering	MPZ5230(EL), MEX4243(P)							
		Select only one									
		MEY6573	Mechatronics Product Design Project (Individual)	Pass in 18 credits in X category at Level 5 or above		15					
		MEY6474	Mechatronics Product Design Project (Group)	Pass in 18 credits in X category at Level 5 or above		12					
	Minimum credits for the Bachelor of Technology Honours in Engineering Degree				**177⁵**	**114²**	**12³**	**21⁴**	**9**	**9**	**0**	**0**

¹ 60 credits of which at least 18 at level 4 or above
² subjected to a minimum of 45 at levels 5 and 6, of which at least 18 at level 6
³ subjected to a minimum of 12 at level 6
⁴ subjected to a minimum of 6 at level 6
⁵ subjected to a minimum of 84 at levels 5 and 6, of which at least 36 from level 6
* For the Higher Diploma this could be replaced with equal number of credits at Level 4 or above.