

Diploma in Advanced Manufacturing (Two-year programme)

T – Theory P- Practical

Semester 1

Module	Hours			Hours per week	Credits
	T	P	Total		
Mathematics & Physics for Manufacturing	30	60	90	6	4
Manufacturing fundamentals	30	60	90	6	4
Engineering drawing & CAD	30	60	90	6	4
CNC programming	30	60	90	6	4
Computer application	30	60	90	6	4
Soft skill	-	30	30	2	1
Safety training-1	-	30	30	2	1
Human values	-	15	15	1	-
Total	150	375	525	35	22

Semester 2

Module	Hours			Hours per week	Credits
	T	P	Total		
Advanced CNC operation	15	30	45	3	2
Automation fundamentals	15	60	75	5	3
Introduction to Robotics	15	45	60	4	2.5
Introduction to IoT	15	45	60	4	2.5
AR/VR	15	45	60	4	2.5
Metrology & quality control	15	75	90	6	3.5
Manufacturing materials	30		30	2	2
Introduction to Additive manufacturing	15	30	45	3	2
Safety training - 2	-	30	30	2	1
Soft skill	-	30	30	2	1
Total	135	390	525	35	21

Semester 3

Module	Hours			Hours per week	Credits
	T	P	Total		
Advanced CAD/CAM	30	60	90	6	4
Metal additive manufacturing	30	60	90	6	4
Robotics	30	75	105	7	4.5
Automation	30	75	105	7	4.5
Smart Manufacturing systems and Integration	30	90	120	8	5
Manufacturing project management	15		15	1	1
Total	165	360	525	35	23

Semester 4

Module	Hours			Hours per week	Credits
	T	P	Total		
CNC laser operation and maintenance	15	60	75	5	3
AI development for vision	15	60	75	5	3
Digital twin	15	60	75	5	3
Multiscale material and structure modeling	15	60	75	5	3
Additive manufacturing simulation	15	60	75	5	3
Project		120	120	8	4
Placement training		30	30	2	1
Total	75	450	525	35	20