

Trades Details Summary

Trade Name	Description	Duration (Days)
Technician Mechatronics	To give Technical Training in Technician Mechatronics.	18

Theory (Technician Mechatronics)

Topic	Key Learning Outcomes	Equipment Required	Duration
Registration of participants	Self-declaration of Covid-19 measures guidelines • Participants Profile. • Describe the role of an Technician Mechatronics.	White Board	2:0
Equipment safety & Knowledge about PPEs	•What is Safety • Awareness about General Safety • Equipment Safety • Use of PPEs: Hand Gloves, Safety Goggles, Apron, Earplugs •Advantages of Safety• Do's & Don'ts	Presentations, Trainer Guide,	2:0
Introduction to Technician Mechatronics Trade	•Introduction of Mechatronics • Objective of mechatronics and application of mechatronics. Basic knowledge of automation. Examples of different types of Mechatronics systems used in industries	Presentations, Trainer Guide	2:0
Introduction to Machine Tools.	Introduction of lathe machine, drill machine, milling machine and grinding machine, Their mechanism and operations. Different kinds of machine accessories.	Presentations, Trainers' Guide.	2:0
Introduction to pneumatics	Introduction of pneumatics. Application of pneumatics in industries. Basics of pneumatics system. Introduction of various pneumatics components and their symbol. Basics pneumatic circuit.	Presentations, Trainer Guide	2:0
Introduction to hydraulics	Introduction of Hydraulics. Application of hydraulics in industries. Basics of hydraulics system. Introduction of various hydraulics components and their symbol. Basics of hydraulics circuit.	Presentations, Trainer Guide,	2:0
Introduction of Basic Electricals	Basic knowledge of Electricity. • Important Symbols used in Electricity. •Knowledge of general Electrical Instruments • Electrical switches, relays •Knowledge about Resistance, Inductance & Capacitance. Electrical circuits.	Presentations, Trainer Guide.	2:0
Introduction of Basic Electronics.	Basic knowledge of Electronics. • Important Symbols used in Electronics • Basic Knowledge of electronics components as Diode, Triode, transistor etc. Introduction to Sensors. Introduction to digital logic. Introduction of Sensors	Presentations, Trainer Guide,	2:0
Introduction to Basic Computer Operations.	Introduction to computer hardware, software other peripherals. Basic knowledge of MS office.	Presentations, Trainer Guide,	2:0
Basic of PLC	Introduction of PLC. • Its objectives and application. Basic knowledge of PLC operation and programming.	Presentations, Trainer Guide,	2:0
Doubt Clearing	•Feed Back • Group discussion	Presentations, White Board	2:0
Valedictory	•Work Ethics • Personal Financial Planning • Health	Presentations, White Board	2:0
Effective Communication	•Subordinates • Peers • Superiors •Customers	Audio-Video	5:0
First Aid	•Electrocution • Cut • Bleeding •Faint • Bandage • Resuscitation •Ambulance	Audio-Video	4:0
Material Handling	•Movement of Raw Material •Movement of Finished Material •Waste Segregation • Cleanliness •Stacking	Audio-Video	3:0
Orientation Programme & Introduction about Entrepreneurship	• Entrepreneur, Entrepreneurship and Enterprise • Scheme & Types of Entrepreneurship • Importance of Entrepreneurship • Entrepreneurship Opportunities & Challenges • Startup Business • Cash Flow * Incubation Centre like DIC & IIT (BHU)	Presentations, Trainer's Guide	2:0
Financial Management	• Financial Management • Resources / Fund availability by Bank • Loan Scheme like Mudra Loan	Presentations, Trainer's Guide	2:0

Practical (Technician Mechatronics)

Topic	Keylearning Outcomes	Equipment Required	Duration
Mechatronics Practical	Learning of construction of basic pneumatics circuits. Practice on pneumatics simulation software .	Basic Pneumatics trainer kit.	10:0
Mechatronics Practical	Learning of construction of basic Electro-pneumatics circuits. Practice on pneumatics simulation software .	Basic Electro-Pneumatics trainer kit.	10:0
Mechatronics Practical	Learning of construction of basic Electro-pneumatics circuit using PLC Practice on pneumatics simulation software	Electro-Pneumatics trainer kit with PLC	10:0
Mechatronics Practical	Learning of construction of basic Hydraulic circuits. Practice on hydraulic simulation software .	Basic Hydraulics trainer kit.	10:0
Mechatronics Practical	Learning of basic programming of PLC.	PLC Trainer.	10:0
Mechatronics Practical	Learning of basic of CNC machine.	CNC machine	10:0
