

Training Trades-Summary

Sl No.	Trade	Duration (Weeks)	No. of Seats
Short Term Training Courses (1-2 Weeks)			
01.	Boiler Operation & Maintenance	1	25
02.	Programmable Logic Controller (PLC)	2	15
Mid-Term Training Courses (4-6 Weeks)			
03.	CNC Lathe Operation & Practice	4	4
04.	CNC Milling Machine Operation & Practice	4	4
05.	CNC Machining Centre Operation & Practice	4	4
06.	Die-sink EDM & Wire-cut EDM Operation & Practice	4	4
07.	Steel melting induction furnace Operation & Practice	4	4
08.	Tools & cutter grinding Operation & Practice	4	4
09.	Pantograph milling machine Operation & Practice	4	4
10.	Quality Control & testing of spare parts	4	4
11.	Plastic Technology	4	15
12.	AutoCAD (2D & 3D)	6	10
13.	Electrical house wiring	6	
14.	Manual Metal Arc Welding	6	
15.	Refrigeration & Air-conditioning	6	

Long term Training Courses (14 Weeks)

16.	Machine Shop	14	25
17.	Welding	14	25
18.	Electrical Maintenance	14	20
19.	Automobile	14	10
20.	Auto-electricity	14	10
21.	Machine Maintenance	14	10
22.	Mechanical; Drafting	14	10
23.	Heat Treatment	14	05
24.	Foundry	14	05
25.	Pattern Making	14	05
26.	Electroplating	14	05

Long Term Training Courses

Machine Shop

Name of the Course	: Machine Shop
Duration	: 14-week
Date	
Nomination deadline	:
Number of Participants	: 20
Course fee	: 10,000/=
Target Group	: Candidate having S.S.C. or equivalent certificate along with technical experience, Merchant Navy Cadets, Defense civilian staff (army, air force and navy), T.T.C/Vocational Trade Course certificate holders, Diploma Engineers.
Course Objects	: Cutting of Square, Acme, Buttress and trapezoidal thread; Practicing form turning with Form tool and by combined longitudinal and Cross feed, Copy turning; Cam shaft, Crank shaft turning; Dee hole drilling; drilling, boring and Reaming to sizes. Gear Cutting; Helical, Bevel and worm gear; Cam milling; Grinding of punch shaft to standard dimensional accuracy and surface finish. Observation of the result of wet and dry grinding; Observing effect of temperature on surface finish. Understanding of mechanical engineering drawing; Informing different machining parameters; Identification of different metals; Introducing design of tools/ cutters and practicing; Make capable of measuring using different measuring instrument; Awareness of safety.
Course Contents	: Technical Drawing Basic Tool Design Safety & Maintenance Shop Theory Measuring Tools, Fits & Tolerances Related Math.

	Engineering Materials Heat-Treatment.
Training Methodology	: Class-room lecture Group discussion Practical exercise Demonstration
Evaluation System	: Observation Question and answer Individual exercise Written test Oral test Overall performance.
Course Advisor	: Director General, BITAC
Course Director	: Director, BITAC, Dhaka
Course Coordinator	: Executive Engr, Training Division, BITAC, Dhaka

Mechanical Drafting

Name of the Course	: Mechanical Drafting
Duration	: 14-week
Date	
Nomination deadline	:
Number of Participants	: 10
Course fee	: 6,000/=
Target Group	: Candidate having S.S.C. or equivalent certificate along with technical experience, Merchant Navy Cadets, Defense civilian staff (army, air force and navy), T.T.C/Vocational Trade Course certificate holders, Diploma Engineers.
Course Objects	: Introduction to and importance of engineering drawing; Drafting instrument and their uses; Dimensioning- outside, inside, radius, angle, taper, tolerance; Practicing different types of conventional drawing; Practicing geometric drawing- straight line, angle, square, polygon, circle, parabola, ellipse; Practicing part/ detail drawing, collective drawing,

	assembly, drawing; Practicing projection drawing, orthographic projection (1st & 3rd angle projection), isometric projection and oblique projection. Exercise on detail parts drawing from assembly drawing with symbols surface finish and tolerances.
Course Contents	: Technical Drawing Basic Tool Design Safety & Maintenance Shop Theory Measuring Tools, Fits & Tolerances Related Math. Engineering Materials Heat-Treatment.
Training Methodology	: Class-room lecture Group discussion Practical exercise Demonstration.
Evaluation System	: Observation Question and answer Individual exercise Written test Oral test Overall performance.
Course Advisor	: Director General, BITAC
Course Director	: Director, BITAC, Dhaka
Course Coordinator	: Executive Engr, Training Division, BITAC, Dhaka

Electrical Maintenance

Name of the Course	: Electrical Maintenance
Duration	: 14-week
Date	
Nomination deadline	:
Number of Participants	: 20
Course fee	: 6,500/=
Target Group	: Candidate having S.S.C. or equivalent certificate along with technical experience, Merchant Navy Cadets, Defense civilian staff (army, air force and navy), T.T.C/Vocational Trade Course certificate holders,

	Diploma Engineers.
Course Objects	: To make capable of domestic and industrial wiring; To make control circuit and detecting faults and its maintenance; To identify various electronic components and understanding electronic circuit and making circuit; Detecting machine faults, machine winding and its repairing and maintenance; Able to measure using various measuring tools and connect measuring instruments to a circuit.
Course Contents	: Electrical Wiring Control System Industrial Electronics Electrical Machine Measuring Tools & Electrical Instruments.
Training Methodology	: Class-room lecture Group discussion Practical exercise Demonstration.
Evaluation System	: Observation Question and answer Individual exercise Written test Oral test Overall performance.
Course Advisor	: Director General, BITAC
Course Director	: Director, BITAC, Dhaka
Course Co-ordinator	: Executive Engr, Training Division, BITAC, Dhaka

Welding

Name of the Course	: Welding
Duration	: 14-week
Date	
Nomination deadline	:
Number of Participants	: 15
Course fee	: 10,000/=
Target Group	: Candidate having S.S.C. or equivalent certificate along with technical experience, Merchant Navy Cadets,

	Defense civilian staff (army, air force and navy), T.T.C/Vocational Trade Course certificate holders, Diploma Engineers.
Course Objects	: Introduction to different types of welding processes; Identification of different metals; Preparation of different types of welding joints; Welding practice at positions; Introducing different welding parameter; Skill development in arc welding technique and gas welding technique; Detecting welding defects and trouble shooting; Designing and making welding jigs and fixtures; Learning welding symbols; Make capable of inspection and testing of weld joints; Safety awareness
Course Contents	: Welding Theory on Arc Welding Heat Treatment Gas Welding/ Cutting Safety & Maintenance Engineering Materials Technical Drawing Reading Welding Hand tools/Measuring Tools.
Training Methodology	: Class-room lecture Group discussion Practical exercise Demonstration.
Evaluation System	: Observation Question and answer Individual exercise Written test Oral test Overall performance.
Course Advisor	: Director General, BITAC
Course Director	: Director, BITAC, Dhaka
Course Coordinator	: Executive Engr, Training Division, BITAC, Dhaka

Pattern Making

Name of the Course	: Pattern Making
Duration	: 14-week
Date	
Nomination deadline	:

Number of Participants	:05
Course fee	:6,000/=
Target Group	:Candidate having S.S.C. or equivalent certificate along with technical experience, Merchant Navy Cadets, Defence civilian staff (army, air force and navy), T.T.C/Vocational Trade Course certificate holders, Diploma Engineers.
Course Objects	: To operate wood lathe, wood planer, band saw, circular saw sand disc and different hand tools etc; Understanding blue print reading; Preparing a proper lay out for pattern and core making; Making complete pattern, core with core print and mold box as per layout, drawing and sample; Determining and adding the appropriate allowances to the pattern depending on the different types of metals; Taking different measurements using different measuring instruments; Introducing sand mold preparation, mold making, core pasting, metal melting, fettling etc.
Course Contents	: Pattern Making Sand Mould Preparation & Practices Safety & Maintenance Engineering Materials Technical Drawing Reading Welding Hand tools/Measuring Tools.
Training Methodology	: Class-room lecture Group discussion Practical exercise Demonstration.
Evaluation System	: Observation Question and answer Individual exercise Written test Oral test Overall performance.
Course Advisor	:Director General, BITAC
Course Director	:Director, BITAC, Dhaka
Course Coordinator	:Executive Engr, Training Division, BITAC, Dhaka

Foundry Practice

Name of the Course	: Foundry Shop
Duration	: 14-week
Date	
Nomination deadline	:
Number of Participants	: 10
Course fee	: 6,000/=
Target Group	: Candidate having S.S.C. or equivalent certificate along with technical experience, Merchant Navy Cadets, Defense civilian staff (army, air force and navy), T.T.C/Vocational Trade Course certificate holders, Diploma Engineers.
Course Objects	: To operate induction furnace, cupola furnace, tilting furnace, pit furnace coke bed furnace, sand mixing machine, overhead crane, core drier, and use different hand tools etc; Understanding blue print reading; Preparation of sand for mold and core making; Making mold/core, pasting, metal melting, fettling etc; Identifying the different metals and alloys; Melting different metals, handling the liquid metal and pouring the liquid metal into the mold cavity; Taking different measurements using different measuring instruments; Introducing the heat treatment processes.
Course Contents	: Pattern Making Casting processes & different types of furnaces Melting Processes & Alloying of Metals Safety & Maintenance Engineering Materials Technical Drawing Reading Welding Hand tools/Measuring Tools Heat-Treatment Sand Mold Preparation & Practices.
Training Methodology	: Class-room lecture Group discussion Practical exercise Demonstration.
Evaluation System	: Observation Question and answer

	Individual exercise Written test Oral test Overall performance.
Course Advisor	: Director General, BITAC
Course Director	: Director, BITAC, Dhaka
Course Coordinator	: Executive Engr, Training Division, BITAC, Dhaka

Automobile

Name of the Course	: Automobile
Duration	: 14-week
Date	
Nomination deadline	:
Number of Participants	: 10
Course fee	: 6,000/=
Target Group	: Candidate having S.S.C. or equivalent certificate along with technical experience, Merchant Navy Cadets, Defense civilian staff (army, air force and navy), T.T.C/Vocational Trade Course certificate holders, Diploma Engineers.
Course Objects	: To introduce hand tools, machine tools and different measuring instruments; To make capable of major overhauling of auto engine; Troubles shooting and corrective measures; Dismantling and assembling of gear box and clutch system; To acquaint the participants with auto parts machining, denting and painting; Repairing and maintenance of suspension and brake systems; Selecting appropriate lube oil, fuel & tyres for different types vehicles.
Course Contents	: Auto-Engine Auto-Electricity Power Transmission System Auto-Parts Machining, Denting and Painting Measuring Tools Suspension, Brake, Fuel & Fuel Injection Systems.
Training Methodology	: Class-room lecture Group discussion Practical exercise

	Model demonstration Team Work Report writing.
Evaluation System	: Observation Question and answer Individual exercise Written test Oral test Overall performance.
Course Advisor	: Director General, BITAC
Course Director	: Director, BITAC, Dhaka
Course Coordinator	: Executive Engr, Training Division, BITAC, Dhaka

Auto-electricity

Name of the Course	: Auto-electricity
Duration	: 14-week
Date	
Nomination deadline	:
Number of Participants	: 10
Course fee	: 6,000/=
Target Group	: Candidate having S.S.C. or equivalent certificate along with technical experience, Merchant Navy Cadets, Defense civilian staff (army, air force and navy), T.T.C/Vocational Trade Course certificate holders, Diploma Engineers.
Course Objects	: To introduce hand tools, machine tools and different measuring instruments; To make capable of major overhauling of auto engine; Troubles shooting and corrective measures; Dismantling and assembling of gear box and clutch system; To acquaint the participants with auto parts machining, denting and painting; Repairing and maintenance of suspension and brake systems; Selecting appropriate lube oil, fuel & tyres for different types vehicles.
Course Contents	: Auto Engine Auto-Electricity Power Transmission System Auto Parts Machining, Denting and Painting Measuring Tools

	Suspension, Brake, Fuel & Fuel Injection Systems.
Training Methodology :	Class-room lecture Group discussion Practical exercise Model demonstration Team Work Report writing.
Evaluation System :	Observation Question and answer Individual exercise Written test Oral test Overall performance.
Course Advisor :	Director General, BITAC
Course Director :	Director, BITAC, Dhaka
Course Coordinator :	Executive Engr, Training Division, BITAC, Dhaka

3.8. Heat- Treatment

Name of the Course :	Heat- Treatment
Duration :	14-week
Date	
Nomination deadline :	
Number of Participants:	05
Course fee :	6,000/=
Target Group :	Candidate having S.S.C. or equivalent certificate along with technical experience, Merchant Navy Cadets, Defense civilian staff (army, air force and navy), T.T.C/Vocational Trade Course certificate holders, Diploma Engineers.
Course Objects :	Introduction to different types of heat treatment furnaces; Acquainting different cooling media for different metal and their alloys; Identification of different metals; Demonstration of quenching technique; Practicing hardness measurement; Preparing carburizing compound and packing work piece into the carburizing compound; Electrolyte deposition of copper, nickel, bright chromium, hard chromium, zinc and cadmium on mild steel, cast iron and stainless steel; Awareness of safety.
Course Contents :	Safety & Maintenance

	Engineering Materials Fundamental of Heat Treatment Furnace Design.
Training Methodology :	Class-room lecture Group discussion Practical exercise Demonstration.
Evaluation System :	Observation Question and answer Individual exercise Written test Oral test Overall performance.
Course Advisor :	Director General, BITAC
Course Director :	Director, BITAC, Dhaka
Course Coordinator :	Executive Engr, Training Division, BITAC, Dhaka

Electroplating

Name of the Course :	Electroplating
Duration :	14-week
Date	
Nomination deadline :	
Number of Participants:	05
Course fee :	6,000/=
Target Group :	Candidate having S.S.C. or equivalent certificate along with technical experience, Merchant Navy Cadets, Defense civilian staff (army, air force and navy), T.T.C/Vocational Trade Course certificate holders, Diploma Engineers.
Course Objects :	Introduction to rectifier, plating tank, tank lining, exhaust system and de-mineralized water; Acquainting polishing & buffing wheel, compound, emery powder and degreasing solution; Identification of different metals; Surface preparation and activation if required; Electrolyte preparation and maintenance; Controlling of different electrolyte parameters Electrolyte deposition of copper, nickel, bright chromium, hard chromium, zinc and cadmium on mild steel, cast iron and; stainless steel Awareness of safety.

Course Contents	: Fundamentals of Electroplating: Process Control Safety and maintenance Engineering Materials Heat treatment.
Training Methodology	: Class-room lecture Group discussion Practical exercise Demonstration.
Evaluation System	: Observation Question and answer Individual exercise Written test Oral test Overall performance.
Course Advisor	: Director General, BITAC
Course Director	: Director, BITAC, Dhaka
Course Coordinator	: Executive Engr, Training Division, BITAC, Dhaka