# Training Calendar: 2024-2025

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# 1 INTRODUCTION

## 1.1 Background

Bangladesh Industrial Technical Assistance Centre other-wise known as BITAC is the successor to Pakistan Industrial Technical Centre (PITAC). It was renamed BITAC after the independence of Bangladesh. BITAC was established in 1962 by merging two other productivity oriented public sector organizations namely IRDC & PIPS. With the establishment of BITAC practice oriented activities for productivity promotion and improvement of Productivity were created through its laboratory and workshops support. The main objective of BITAC is therefore, promotion of the national economy through development of product, process and skilled manpower. BITAC has Five Centres in Bangladesh at Dhaka, Chittagong, Chandpur, Khulna and Bogra.

## 1.2 Vision & Mission

**OUR VISION:**

- To become the best among all technical skill human resource developers & industrial spares manufactures in all aspects.
- Empower employees for shouldering higher responsibilities resulting in job enrichment and job satisfaction.
- Undertaking various research and development program has to explore the new and innovative manufacture and use of spares parts.

**OUR MISSION:**

- To upgrade the skills of the industrial personnel in technical and managerial fields.
- To disseminate modern technical know-how among industrial personnel through seminars, group discussions, demonstrations, publications, film show, etc.
- To extend consulting services to industrial organization and industries primarily in the private sector.
- To organize programme for capacity buildup in SME sector.
- To promote productivity consciousness in the people by encouraging them to form productivity associations in industrial Centers etc.
- To co-operate with international and national organizations and agencies engaged in activities for increasing industrial productivity.
- To adopt such measures and take such steps and do all such things as many be conducive to the promotion of cordial relations between the Centre and persons interested in the objectives of the Centre.
- To secure the recognition of the Centre in Bangladesh and other foreign counties.
- In conjunction with the upgrading programme and to make it more effective, the **BITAC shall:**
  - √ Assists in the design and manufacture of newly developed jigs, fixtures, gauges, moulds,dies, punches, tools and products (proto-type0 for industries and agriculture;
  - √ Develop products, processes and tools, etc. to help industries in improving the quality, increase production, reduce cost and utilizing indigenous raw materials and to increase the scope of indigenous manufacture and
  - √ Conduct productivity studies in such selected plants as may be determined and recommend ways and means for improvement.
  - √ To do all such other lawful things as the Centre may think identical or conducive to the attainment of any or all the objectives of the Centre mentioned above.



## 1.3 Advisory Committee

| | | |
|---|---|---|
| Chairperson | : | Parimal Singha<br>Director General<br>BITAC. |
| Member | : | Dr. Md. Jalal Uddin PEng.<br>Director (Planning), BITAC. |
| | : | Md. Abu Sayeed Khan<br>Director (Training), BITAC. |

## 1.4 Editorial Committee

| | | |
|---|---|---|
| Chairperson | : | Md. Abu Sayeed Khan<br>Director (Training), BITAC. |
| Member | : | Dr.Engr. Mazharul Habib<br>Additional Director (Training), Dhaka. |
| | : | Md. Masum Zakaria<br>Assistant Engineer (Training), Dhaka. |
| | : | Md. Hasib Mahmud<br>Assistant Engineer (Training), Dhaka. |

## 1.5 Course Conducting Committee

| | | |
|---|---|---|
| Course Advisor | : | Director General<br>BITAC |
| Course Director | : | Director (Training),<br>BITAC |
| Course Coordinator | : | Additional Director<br>BITAC. |

## 1.6 Governing Body of BITAC

| Rank | Organization | Designation at Governing Body |
|---|---|---|
| Secretary | Ministry of Industries | Chairman |
| Additional Secretary or Joint Secretary (BITAC Wing) | Ministry of Industries | Member |
| Joint Secretary | Finance Division ( Ministry of Finance) | Member |
| Director General | Directorate of Technical Education | Member |
| Director General | Directorate of Labor & Manpower | Member |
| Director General | Bureau of Manpower, Employment and Training | Member |
| Member | National Skill Development Authority | Member |
| Executive Member | Bangladesh Investment Development Authority | Member |
| President | Bangladesh Engineering Industry Owners Association | Member |
| President | Federation of Bangladesh Chambers of Commerce and Industries | Member |
| Director General | Bangladesh Industrial Technical Assistance Center (BITAC) | Member Secretary |

## 2. SCHEDULE OF THE TECHNICAL TRAINING PROGRAM, BITAC,

### 2.1 Long Term Technical Training Program (Regular)

| Sl. No. | Name of the Course | Course No. | Schedule | Duration (Weeks) | No. of seats |
|---|---|---|---|---|---|
| 1. | Machine Shop | 173<br>174<br>175<br>176 | 07 July2024 to 10Oct 2024<br>20 Oct 2024 to 23Jan 2025<br>26 Jan 2025 to 01May 2025<br>04 May 2025 to 07 Aug 2025 | 14 | 25 |
| 2. | Electrical Maintenance | 173<br>174<br>175<br>176 | 07 July2024 to 10Oct 2024<br>20 Oct 2024 to 23Jan 2025<br>26 Jan 2025 to 01May 2025<br>04 May 2025 to 07 Aug 2025 | 14 | 25 |
| 3. | Welding | 173<br>174<br>175<br>176 | 07 July2024 to 10Oct 2024<br>20 Oct 2024 to 23Jan 2025<br>26 Jan 2025 to 01May 2025<br>04 May 2025 to 07 Aug 2025 | 14 | 25 |
| 4. | Machine Maintenance | 173<br>174<br>175<br>176 | 07 July2024 to 10Oct 2024<br>20 Oct 2024 to 23Jan 2025<br>26 Jan 2025 to 01May 2025<br>04 May 2025 to 07 Aug 2025 | 14 | 25 |
| 5. | Automobile & Autoelectrcity | 173<br>174<br>175<br>176 | 07 July2024 to 10Oct 2024<br>20 Oct 2024 to 23Jan 2025<br>26 Jan 2025 to 01May 2025<br>04 May 2025 to 07 Aug 2025 | 14 | 25 |
| 6. | Foundry & Pattern Making | 173<br>174<br>175<br>176 | 07 July2024 to 10Oct 2024<br>20 Oct 2024 to 23Jan 2025<br>26 Jan 2025 to 01May 2025<br>04 May 2025 to 07 Aug 2025 | 14 | 10 |

### 2.2 Customized Technical Training Program

| Sl. No. | Name of the Course | Duration (Hours) | No. of seats |
|---|---|---|---|
| 1 | Machine Shop | 360 | 20 |
| 2 | Electrical Maintenance | 360 | 20 |
| 3 | Welding | 360 | 20 |
| 4 | Machine Maintenance | 360 | 20 |
| 5 | Automobile & Auto-electricity | 360 | 10 |
| 6 | Foundry & Pattern Making | 360 | 5 |
| 7 | Heat Treatment | 360 | 5 |
| 8 | Solid Works | 210 | 20 |
| 9 | Auto CAD (2D & 3D) | 210 | 20 |
| 10 | Plastic Technology | 210 | 6 |
| 11 | CNC Lathe Operation &Practice | 140 | 4 |
| 12 | CNC Milling Operation & Practice | 140 | 4 |
| 13 | CNC Machining Center Operation & Practice | 140 | 4 |
| 14 | Die Sink EDM & Wire CutEDM Operation & Practice | 140 | 4 |



### 2.3 Technical Training Program Addressing 4IR (Regular)

| Sl. No. | Name of the Course | Duration (Hours) | No. of seats/Course |
|---|---|---|---|
| 1 | 3D Printing | 120 | 5 |
| 2 | Computer Aided Engineering (CAE) | 120 | |
| 3 | Cloud Based CNC Machining Center Operation | 120 | |
| 4 | Energy Monitoring System (Installation, Operation & SCADA Visualization) | 120 | |

### 2.4 Short Term Technical Training Program (Regular)

| Sl. No. | Name of the Course | Course No. | Schedule | Duration (Hours) | No. of seats/Course |
|---|---|---|---|---|---|
| | Programmable Logic Controller (PLC) | 71<br>72<br>73<br>74 | 21 Jul 2024 to 01 Aug 2024<br>20 Oct 2024 to 31 Oct 2024<br>26 Jan 2025 to 06 Feb 2025<br>04 May 2025 to 15 May 2025 | 70 | 20 |
| | Boiler Operation & Maintenance | 54<br>55<br>56<br>57<br>58<br>59 | 21 Jul 2024 to 25 Jul 2024<br>22 Sep 2024 to 26 Sep 2024<br>24 Nov 2024 to 28 Nov 2024<br>26 Jan 2025 to 30 Jan 2025<br>09 Mar 2025 to 13 Mar 2025<br>04 May 2025 to 08 May 2025 | 35 | 20 |

### 2.5 Industrial Attachment Technical Training Program (As per stackeholders desire)

## 3 SLONG TERM TECHNICAL TRAINING PROGRAM (REGULAR), BITAC, DHAKA.

### 3.1 Machine Shop

| | | |
|---|---|---|
| Name of the Course | : | Machine Shop |
| Duration | : | 14 weeks |
| Schedule | : | 07 July 2024 to 10 Oct 2024, 20 Oct 2024 to 23 Jan 2025, 26 Jan 2025 to 01 May 2025and 04 May 2025 to 07 Aug 2025; For course no:173, 174, 175 and 176 respectively. |
| Nomination deadline | : | 04 July 2024, 17 Oct 2024, 23 Jan 2025 and 30April 2025; For course no: 173, 174, 175 and 176 respectively. |
| Number of Seats | : | 25 |
| Course fee | : | 5,000/- |
| Target Group | : | Candidate having SSC or equivalent certificate along with technical experience, Merchant Navy Cadets, Defense civilian staff (army, air force and navy), TTC/VTI certificate holders, Diploma in Engineering. |
| Course Objects | : | Square, Acme, Buttress and trapeziod thread cutting, Form turning with Form tool and by combined longitudinal and Cross feed, Copy turning; Cam shaft, Crank shaft turning; Dee hole drilling, boring and Rearming to sizes, Gear Cutting; Helical, Bevel and worm gear; Cam milling; Grinding on punch shaft to standard dimensional accuracy and surface finishing; Effect to temperature of surface finish.<br>• Understanding of mechanical engineering drawing;<br>• Informing different machining parameters;<br>• Identification on different metals.<br>• Introducing design of tools/cutters and practicing;<br>• Make Capable of measuring using different measuring instrument<br>• Awarenss of safety |
| Course Contents | : | • Technical Drawing<br>• Basic Tool Design<br>• Safety & Maintenance<br>• Shop Theory<br>• Measuring Tools, Fits & Tolerances<br>• Related Math.<br>• Engineering Materials<br>• Heat-Treatment |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration |
| Evaluation System | : | • Observation<br>• Question and answer<br>• Individual exercise<br>• Written test<br>• Oral test<br>• Overall performance. |



### 3.2 Electrical Maintenance

| | | |
|---|---|---|
| Name of the Course | : | Electrical Maintenance [Regular] |
| Duration | : | 14 weeks |
| Schedule | : | 07 July 2024 to 10 Oct 2024, 20 Oct 2024 to 23 Jan 2025, 26 Jan 2025 to 01 May 2025and 04 May 2025 to 07 Aug 2025; For course no:173, 174, 175 and 176 respectively. |
| Nomination deadline | : | 04 July 2024, 17 Oct 2024, 23 Jan 2025 and 30April 2025; For course no: 173, 174, 175 and 176 respectively. |
| Number of Seats | : | 25 |
| Course fee | : | 8,000/- |
| Target Group | : | Candidate having SSC or equivalent certificate along with technical experience, Merchant Navy Cadets, Defense civilian staff (army, air force and navy), TTC/VTI certificate holders, Diploma in Engineering. |
| Course Objects | : | • To develop skill in domestic and industrial wiring;<br>• To make control circuit and detecting faults and its maintenance;<br>• To identify various electronic components and understanding electronic circuit and making circuit.<br>• Detecting machine faults, machine winding and is repairing and maintenance;<br>• Able of measure using various measuring tools and connect measuring instrument to a circuit. |
| Course Contents | : | • Electrical Wiring<br>• Control System<br>• Industrial Electronics<br>• Electrical Machine<br>• Measuring Tools & Electrical Instruments. |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration |
| Evaluation System | : | • Observation<br>• Question and answer<br>• Individual exercise<br>• Written test<br>• Oral test<br>• Overall performance. |

### 3.3 Welding

| | | |
|---|---|---|
| Name of the Course | : | Welding |
| Duration | : | 14 weeks |
| Schedule | : | 07 July 2024 to 10 Oct 2024, 20 Oct 2024 to 23 Jan 2025, 26 Jan 2025 to 01 May 2025and 04 May 2025 to 07 Aug 2025; For course no:173, 174, 175 and 176 respectively. |
| Nomination deadline | : | 04 July 2024, 17 Oct 2024, 23 Jan 2025 and 30April 2025; For course no: 173, 174, 175 and 176 respectively. |
| Number of Seats | : | 25 |
| Course fee | : | 7,500/- |
| Target Group | : | Candidate having SSC or equivalent certificate along with technical experience, Merchant Navy Cadets, Defense civilian staff (army, air force and navy), TTC/VTI certificate holders, Diploma in Engineering. |
| Course Objects | : | • Introduction to different types of welding processes;<br>• Identification of different metals;<br>• Preparation of different types of welding joints;<br>• Welding practice at positions;<br>• Introducting different welding Parameter<br>• Skill development in arc welding technique and gas welding technique;<br>• Detecing welding defects and trouble shooting<br>• Designing and making welding jigs fixtures;<br>• Learning welding symbols;<br>• Make capable of inspection and testing of wel joints;<br>• Safety awareness. |
| Course Contents | : | • Welding Theory on Arc Welding<br>• Heat Treatment<br>• Gas Welding/Cutting<br>• Safety & Mainteance<br>• Engineering Materials<br>• Technical Drawing Reading<br>• Welding Hand tools/Measuring Tools. |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration |
| Evaluation System | : | • Observation<br>• Question and answer<br>• Individual exercise<br>• Written test<br>• Oral test<br>• Overall performance. |



### 3.4 Automobile & Auto-electricity

| | | |
|---|---|---|
| Name of the Course | : | Auto-electricity [Regular] |
| Duration | : | 14weeks |
| Schedule | : | 07 July 2024 to 10 Oct 2024, 20 Oct 2024 to 23 Jan 2025, 26 Jan 2025 to 01 May 2025and 04 May 2025 to 07 Aug 2025; For course no:173, 174, 175 and 176 respectively. |
| Nomination deadline | : | 04 July 2024, 17 Oct 2024, 23 Jan 2025 and 30April 2025; For course no: 173, 174, 175 and 176 respectively. |
| Number of Seats | : | 10 |
| Course fee | : | 5,000/- |
| Target Group | : | Candidate having SSC or equivalent certificate along with technical experience, Merchant Navy Cadets, Defense civilian staff (army, air force and navy), TTC/VTI certificate holders, Diploma in Engineering. |
| Course Objects | : | • To introduc hand tools, machine tools and different measuring instruments;<br>• To make capable of major overhauling of auto engine; electrical & electronic parts.<br>• Troubles shooting and corrective measures;<br>• Dismantling and assembling of gear box and clutch system;<br>• To acquaint the participants with auto parts machining, denting and painting;<br>• Reparing and maintenace of suspension and break system;<br>• Selecting appropriate blue oil, fuel & tyres for different types vehicles. |
| Course Contents | : | • Basic Engine<br>• Fundamental-Electricil and electronic system<br>• Power Transmission System<br>• Auto-Parts Machining, Denting and painting<br>• Measuring Tools<br>• Suspension, Break, Fuel & Fuel Injection Systems. |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration<br>• Model demonstration<br>• Team Work<br>• Report writing |
| Evaluation System | : | • Observation<br>• Question and answer<br>• Individual exercise<br>• Written test<br>• Oral test<br>• Overall performance. |

### 3.5 Machine Maintenance

| | | |
|---|---|---|
| Name of the Course | : | Machine Maintenance |
| Duration | : | 14 weeks |
| Schedule | : | 07 July 2024 to 10 Oct 2024, 20 Oct 2024 to 23 Jan 2025, 26 Jan 2025 to 01 May 2025and 04 May 2025 to 07 Aug 2025; For course no:173, 174, 175 and 176 respectively. |
| Nomination deadline | : | 04 July 2024, 17 Oct 2024, 23 Jan 2025 and 30April 2025; For course no: 173, 174, 175 and 176 respectively. |
| Number of Seats | : | 25 |
| Course fee | : | 5,000/- |
| Target Group | : | Candidate having SSC or equivalent certificate along with technical experience, Merchant Navy Cadets, Defense civilian staff (army, air force and navy), TTC/VTI certificate holders, Diploma in Engineering. |
| Course Objects | : | • Inroduction to different machine tools such as lathe machine, milling machine, grinding machine, boring machine, planer machine, drill machine, hydralic and mechanical press machine, rolling machine, shear machine;<br>• Acquainting different types of mechanical compound and driving System;<br>• Understanding of blue print reading;<br>• Make capable of disassembly and assembly of different machine tools and components;<br>• Replacement of lubricants, cutting oil, o-ring, gasket etc;<br>• Awaraness of safety and maintenance. |
| Course Contents | : | • Machine Elements<br>• Mechanical Component and Driving System<br>• General Maintenace<br>• Technical Drawing Reading<br>• Hand tools/Measuring Tools<br>• Safety & Maintenace. |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration |
| Evaluation System | : | • Observation<br>• Question and answer<br>• Individual exercise<br>• Written test<br>• Oral test<br>• Overall performance. |



### 3.6 Foundry & Pattern Making

| | | |
|---|---|---|
| Name of the Course | : | Foundry Practic |
| Duration | : | 14 weeks |
| Schedule | : | 07 July 2024 to 10 Oct 2024, 20 Oct 2024 to 23 Jan 2025, 26 Jan 2025 to 01 May 2025and 04 May 2025 to 07 Aug 2025; For course no:173, 174, 175 and 176 respectively. |
| Nomination deadline | : | 04 July 2024, 17 Oct 2024, 23 Jan 2025 and 30April 2025; For course no: 173, 174, 175 and 176 respectively. |
| Number of Seats | : | 05 |
| Course fee | : | 5,000/- |
| Target Group | : | Candidate having SSC or equivalent certificate along with technical experience, Merchant Navy Cadets, Defense civilian staff (army, air force and navy), TTC/VTI certificate holders, Diploma in Engineering. |
| 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;<br>• Understanding blue print reading<br>• Preparation of sand for mould and core making,<br>• Making mould/core, pasting, metal melting, fettiling etc;<br>• Identifying the different metals and alloys;<br>• Melting different metals, handling the liquid metal and puring the liquid metal into the mold cavity;<br>• Taking different measurement using different mesuring instruments;<br>• Introducing the heat treatment processes. |
| Course Contents | : | • Pattern Making Casting processes<br>• Sand mould Preparation & Practices.<br>• Different types of furnace<br>• Melting Processes Alloying of Metals<br>• Safety & Mainteance<br>• Engineering Materials<br>• Technical Drawing & Reading<br>• Welding Hand tools/Measuring Tools.<br>• Heat-Treatment |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration |
| Evaluation System | : | • Observation<br>• Question and answer<br>• Individual exercise<br>• Written test<br>• Oral test<br>• Overall performance. |

## 4. Technical Training Program Addressing 4IR (Customized)

### 4.1 Computer Aided Engineering (CAE)

| | | |
|---|---|---|
| Name of the Course | : | Computer Aided Engineering (CAE) |
| Duration | : | 4 Weeks (120 Hours) |
| Schedule | : | 11 Aug 2024 to 05 Sep 2024, 22Dec 2024 to16 Jan 2025 and 20 Apr 2025 to15 May 2025;<br>For course no: 7th, 8th and 9th respectively. |
| Nomination deadline | : | 08 Aug 2024, 19 Dec 2024and 17 Apr 2025;<br>For course no: 7th, 8th and 9th respectively. |
| Number of Seats | : | 05 |
| Course fee | : | 7,500/- |
| Target Group | : | B.Sc in Engineering, Diploma in Engineering, or equivalent certificate with technical experience and computer literacy |
| Course Objects | : | • To design 3D object for CNC manufacturing using CAD software<br>• To operate the VMC with all recommended settings for manufacturing 3D object<br>• To set up static stress simulation |
| Course Contents | : | • 3D Part modelling using Solidworks<br>• Generating CNC toolpath using Master CAM<br>• CNC Programming for vertical machining centre (VMC)<br>• Introduction to engineering simulation<br>• Introduction to Cloud based CAD software (Fusion 360) |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration |
| Evaluation System | : | • Attendance<br>• Oral Question and answer<br>• Individual exercise<br>• Written Test<br>• Portfolio |



### 4.2 3D Printing

| | | |
|---|---|---|
| Name of the Course | : | 3D Printing |
| Duration | : | 4 Weeks (120 Hours) |
| Schedule | : | 11 Aug 2024 to 05 Sep 2024, 22 Dec 2024 to16 Jan 2025 and 20 Apr 2025 to15 May 2025;<br>For course no: 7th, 8th and 9th respectively. |
| Nomination deadline | : | 08 Aug 2024, 19 Dec 2024and 17 Apr 2025;<br>For course no: 7th, 8th and 9th respectively. |
| Number of Seats | : | 05 |
| Course fee | : | 5000/- |
| Target Group | : | B.Sc in Engineering, Diploma in Engineering, or equivalent certificate with technical experience and computer literacy |
| Course Objects | : | • To design 3D object for 3D Printing in CAD software<br>• To install 3D Printer and all necessary accessories<br>• To troubleshoot common 3D Printing issues<br>• To use slicing software and learn G-code for 3D printers |
| Course Contents | : | • 3D Part modelling using Solidworks<br>• Detailed discussion on slicing software for FDM<br>• 3D Printers like Ultimaker Cura and Simplify 3D<br>• Hands-on practice on 3D Printer installation, maintenance and operation |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration |
| Evaluation System | : | • Attendance<br>• Oral Question and answer<br>• Individual exercise<br>• Written Test<br>• Portfolio |

### 4.3 Cloud Based CNC Machining Center Operation

| | | |
|---|---|---|
| Name of the Course | : | Cloud Based CNC Machining Center Operation |
| Duration | : | 4 Weeks (120 Hours) |
| Schedule | : | 11 Aug 2024 to 05 Sep 2024, 22Dec 2024 to16 Jan 2025 and 20 Apr 2025 to15 May 2025;<br>For course no: 7th, 8th and 9th respectively. |
| Nomination deadline | : | 08 Aug 2024, 19 Dec 2024and 17 Apr 2025;<br>For course no: 7th, 8th and 9th respectively. |
| Number of Seats | : | 05 |
| Course fee | : | 7,500/- |
| Target Group | : | B.Sc in Engineering, Diploma in Engineering,<br>or equivalent certificate with technical experience and computer literacy |
| Course Objects | : | • To design a 3D object for CNC manufacturing in CAD software<br>• To operate the VMC with all recommended settings for manufacturing a 3D object<br>• To use production monitoring software to track factory production and efficiency. |
| Course Contents | : | • 3D Part modelling using Solid works<br>• Generating CNC toolpath using MasterCAM<br>• CNC Programming for vertical machining center (VMC)<br>• Introduction to cloud-based production monitoring software for CNC |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration |
| Evaluation System | : | • Attendance<br>• Oral Question and answer<br>• Individual exercise<br>• Written Test<br>• Portfolio |



### 4.4 Electrical Energy Monitoring System (Installation, Operation & SCADA Visualization)

| | | |
|---|---|---|
| Name of the Course | : | Electrical Energy Monitoring System (Installation, Operation & SCADA Visualization) |
| Duration | : | 4 Weeks (120 Hours) |
| Schedule | : | 11 Aug 2024 to 05 Sep 2024, 22Dec 2024 to16 Jan 2025 and 20 Apr 2025 to15 May 2025;<br>For course no: 7th, 8th and 9th respectively. |
| Nomination deadline | : | 08 Aug 2024, 19 Dec 2024and 17 Apr 2025;<br>For course no: 7th, 8th and 9th respectively. |
| Number of Seats | : | 05 |
| Course fee | : | 7,500/- |
| Target Group | : | B.Sc in Engineering, Diploma in Engineering,<br>or equivalent certificate with technical experience and computer literacy |
| Course Objects | : | • To Install Energy Monitoring Devices<br>• To Perform System Wiring of Electrical & Communication network of Electrical Energy Monitoring<br>• To Configuration Multifunction Energy Meter<br>• To Configuration Main PLC CPU of Energy Monitoring<br>• To Configuration PC SCADA of Energy Monitoring<br>• To Configure Network devices of Energy Monitoring<br>• To Configure Web and Mobile Client of Energy Monitoring<br>• To Monitor and Data Logging to PC SCADA Of energy parameters |
| Course Contents | : | • Information and specifications of Energy Monitoring Software<br>• PLC,IIoTGateway,Multifunctional Energy Meterand MODBUSRTU Manual<br>• Installmobile, desktop SCADA monitoring application<br>• Monitoring Application Configurationon SCADAPC.<br>• Establish PLC and monitoring app communication.<br>Configuration of IP Addres Remote Monitoring Monitoring System<br>• Configuration of API key Remote Monitoring of Energ Monitoring System<br>• Configuration of User ID and password Remote Monitoring of Energy Monitoring System<br>• ConfigurationVPN &Talk 2M webaccess Remote Monitoring of Energy Monitoring System<br>• Configuration of WAN IP Remote Monitoring of Energy |
| Training Methodology | : | • Classroom lecture<br>• Practical Exercise<br>• Demonstration |
| Evaluation System | : | • Attendance<br>• Oral Question and Answer<br>• Individual Exercise |

## 5. Customized Technical Training Program.

### 5.1 Heat Treatment

| | | |
|---|---|---|
| Name of the Course | : | Heat Tratment |
| Duration | : | 12 weeks (360 Hours) |
| Schedule | : | As per Discussion |
| Nomination deadline | : | As per Demand. |
| Number of Seats | : | 05 |
| Trade fee | : | 6,000/- |
| Target Group | : | Candidate having SSC or equivalent certificate along with technical experience, Merchant Navy Cadets, Defense civilian staff (army, air force and navy), TTC/VTI certificate holders, Diploma in Engineering. |
| Trade Objects | : | • Demonstration and practicing on Annealing Normalizing, Hardening & Tempering.<br>• Inroduction to different types of heat treatment furnaces;<br>• Acquainting with different cooling media used for different metals and their alloys;<br>• Identification of different type of metals;<br>• Demonstration of quenching technique;<br>• Practicing hardness measurement;<br>• Preparing carburizing compound;<br>• Demonstration on packaging of job into carburizing compund.<br>• Awaraness of safety. |
| Course Contents | : | • Safety & Maintenance<br>• Engineering materials<br>• Fundamental of Heat Treatment<br>• Furnace Design |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration |
| Evaluation System | : | • Observation<br>• Question and answer<br>• Individual exercise<br>• Written test<br>• Oral test<br>• Overall performance. |



### 5.2 CNC Lathe Operation & Practice

| | | |
|---|---|---|
| Name of the Course | : | CNC Lathe Operation & Practice |
| Duration | : | 4 weeks (140 Hours) |
| Schedule | : | As per Discussion. |
| Nomination deadline | : | As per Demand. |
| Number of Seats | : | 04 |
| Trade fee | : | 5,000/- |
| Target Group | : | BSc. in Engineering, Diploma in Engineering TTC/HSC (Voc) |
| Trade Objects | : | • In depth exploration of ISO as related to lathe operation;<br>• Detail Lessons ranging from basic to advanced programming; techniques using ISO and a representative lathe CNC control (Fagor);<br>• Hands on machining practice under real-life shop environment. |
| Course Contents | : | • Introduction & Basic programming.<br>• ISO Code (G & M code)<br>• Machine parameter & Function.<br>• Different operation & ramming. |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration |
| Evaluation System | : | • Observation<br>• Question and answer<br>• Individual exercise<br>• Oral test<br>• Overall performance. |

### 5.3 CNC Milling Operation & Practice

| | | |
|---|---|---|
| Name of the Course | : | CNC Milling Operation & Practice |
| Duration | : | 04 weeks (140 Hours) |
| Schedule | : | As per Discussion. |
| Nomination deadline | : | As per Demand. |
| Number of Seats | : | 04 |
| Trade fee | : | 5,000/- |
| Target Group | : | BSc. in Engineering, Diploma in Engineering TTC/HSC (Voc) |
| Trade Objects | : | • In depth exploration of ISO as related to milling;<br>• Detail Lessons ranging from basic to advanced programming; techniques using ISO and a representative milling CNC control (Haidenhein TNC-310);<br>• Hands on machining practice under real-life shop environment. |
| Course Contents | : | • Introduction & Basic programming.<br>• ISO Code (G & M code)<br>• Machine parameter & Function.<br>• Different operation & ramming. |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration |
| Evaluation System | : | • Observation<br>• Question and answer<br>• Individual exercise<br>• Oral test<br>• Overall performance. |



### 5.4 CNC Machining Center Operation & Practice

| | | |
|---|---|---|
| Name of the Course | : | CNC Machining Center Operation & Practice |
| Duration | : | 04 weeks (140 Hours) |
| Schedule | : | As per Discussion. |
| Nomination deadline | : | As per Demand. |
| Number of Seats | : | 04 |
| Trade fee | : | 7,500/- |
| Target Group | : | BSc. in Engineering, Diploma in Engineering TTC/HSC (Voc) |
| Trade Objects | : | • In depth exploration of ISO as related to milling;<br>• Detail Lessons ranging from basic to advance programming; techniques using ISO and a representative multi-axis machining center CNC control (Fanuc-21) (Haidenhein TNC-310);<br>• Hands on machining practice under real-life shop environment. |
| Course Contents | : | • Introduction & Basic programming.<br>• ISO Code (G & M code)<br>• Machine parameter & Function.<br>• Different operation & ramming. |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration |
| Evaluation System | : | • Observation<br>• Question and answer<br>• Individual exercise<br>• Oral test<br>• Overall performance. |

## 5.5 Die Sink EDM & Wire Cut EDM Operation & Practice

| | | |
|---|---|---|
| Name of the Course | : | Die Sink EDM & Wire Cut EDM Operation & Practice |
| Duration | : | 04 weeks (140 Hours) |
| Schedule | : | As per discussion. |
| Nomination deadline | : | As per Demand. |
| Number of Seats | : | 04 |
| Course fee | : | 7,500/- |
| Target Group | : | BSc. in Engineering, Diploma in Engineering TTC/HSC (Voc) |
| Course Objects | : | • Understanding of EDM process and factors involved;<br>• Rendering knowledge on die-sink & wirecut EDM machines, their components and control systems;<br>• Acquaintance with eletrode (Properties, materials and machining), dielectric fluids (Properties, function);<br>• Programming with ISO codes and a representive control language (Robostar);<br>• Use of CAM and Simulation to facilitate programming;<br>• Making workable mold cavities, dies and punches using die-sink & wire-cut EDM process. |
| Course Contents | : | • Basic programming (wire cut) & operation<br>• Basic operation<br>• Application operation<br>• NC programming.<br>• My cam (software). |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration |
| Evaluation System | : | • Observation<br>• Question and answer<br>• Individual exercise<br>• Oral test<br>• Overall performance. |



## 5.6 Plastic Technology

| | | |
|---|---|---|
| Name of the Course | : | Plastic Technology |
| Duration | : | 4 weeks (140 Hours) |
| Schedule | : | As per discussion. |
| Nomination deadline | : | As per discussion. |
| Number of Seats | : | 05 |
| Course fee | : | 4,000/- |
| Target Group | : | Entrepreneur, technical staff working in the Plastic processing industries, TTC/VTI & disabilities. |
| Course Objects | : | • To operate injection moulding machine, compression moulding machine, vacuum forming machine, extruder machine, blow moulding and ther plastic machinery;<br>• Usage and maintenance of plastic mould;<br>• Selection of appropriate plastic materials for products;<br>• Maintenance and controlling of plastic machinery;<br>• Testing procedure of plastic. |
| Course Contents | : | • Plastic materials<br>• Plastic Testing<br>• Plastic Processing machinery<br>• Mold making<br>• Heat Treatment<br>• Electroplating<br>• Machine Control System and Maintenance. |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Case study<br>• Industrial visit. |
| Evaluation System | : | • Observation<br>• Qusetion and Answer<br>• Individual exercise<br>• Oral test<br>• Overall performance. |

## 5.7 Auto CAD (2D & 3D)

| | | |
|---|---|---|
| Name of the Course | : | Auto CAD (2D & 3D) |
| Duration | : | 06 weeks (210 Hours) |
| Schedule | : | 07 July 2024 to 15 Aug 2024, 20 Oct 2024 to 28 Nov 2024, 26 Jan 2025 to 03Apr 2025 and 04 May 2025 to 12June 2025;<br>For course no: 173, 174, 175 and 176 respectively. |
| Nomination deadline | : | 04 July 2024, 17 Oct 2024, 23 Jan 2025 and 30 April 2025; For course no: 173, 174, 175 and 176 respectively. |
| Number of Seats | : | 20 |
| Trade fee | : | 7,500/- |
| Target Group | : | BSc. in Engineering, Diploma in Engineering, TTC/ HSC (Voc) |
| Trade Objects | : | • Understanding and practicing of working and assembly drawing;<br>• Introducing the importance of computer aided design (CAD);<br>• Male capable of computer aided designing. |
| Course Contents | : | • Mechanical Drafting<br>• Auto CAD-2D<br>• Auto CAD-3D<br>• Component drawing |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration |
| Evaluation System | : | • Observation<br>• Question and answer<br>• Individual exercise<br>• Oral test<br>• Overall performance. |



## 5.8 Solid work

| | | |
|---|---|---|
| Name of the Course | : | Solid work [Customized] |
| Duration | : | 6 weeks ( 210 Hours) |
| Schedule | : | As per discussion. |
| Nomination deadline | : | As per demand. |
| Number of Seats | : | 20 |
| Course fee | : | 7,500/- |
| Target Group | : | BSc. in Engineering, Diploma in Engineering, TTC/ HSC (Voc) |
| Course Objects | : | • Understanding and practicing of working and assembly drawing;<br>• Introducing the importance of computer aided design (CAD);<br>• Learn about innovation of desin and design modification.<br>• Know about the application of solid works drowing |
| Course Contents | : | • Mechanical Drafting<br>• Solid works-2D<br>• Solid works-3D<br>• Assembly drawing<br>• Special Fitxare drawing |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration |
| Evaluation System | : | • Observation<br>• Question and answer<br>• Individual exercise<br>• Oral test<br>• Overall performance. |

## 6. SHORT TERM TECHNICAL TRAINING PROGRAM, BITAC, DHAKA .

### 6.1 Programmbale Logic Controller (PLC)

| | | |
|---|---|---|
| Name of the Course | : | Programmbale Logic Controller (PLC) |
| Duration | : | 2 -week (70 Hours) |
| Schedule | : | 21 Jul 2024 to 01 Aug 2024, 20 Oct 2024 to 31 Oct 2024, 26 Jan 2025 to 06 Feb 2025 and 04 May 2025 to 15 May 2025;<br>For course no: 71, 72, 73 and 74 respectively. |
| Nomination deadline | : | 18 Jul 2024, 17 Oct 2024, 23 Jan 2025 and 30 Apr 2025;<br>For course no: 71, 72, 73 and 74 respectively. |
| Number of Seats | : | 20 |
| Trade fee | : | 7,500/- |
| Target Group | : | Candidates having BSc. in Engineering and Graduation in Applied Physics, Diploma in Engineering |
| Trade Objects | : | • To describe functions and uses of PLC<br>• To develop PLC program for industrial process<br>• To modyfy existing Really Control System into PLC System<br>• To install PLC system in a process plant<br>• To maintain and troubleshoot the PLC system. |
| Course Contents | : | • Introduction to PLC<br>• Conventional Relay Control System<br>• Functional description of PLC<br>• Basic function block of PLC<br>• Introduction to programming<br>• Sensors & Actuators<br>• Relay types Instructions<br>• Timer & Counter Instruction<br>• Loop creating sequencer Instruction<br>• Process operation by PLC at BITAC pilot plant |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Industrial visit<br>• Demonstration |
| Evaluation System | : | • Observation<br>• Question and answer<br>• Individual exercise<br>• Oral test<br>• Overall performance. |



### 6.2 Boiler Operation and Maintenance

| | | |
|---|---|---|
| Name of the Course | : | Boiler Operation and Maintenance |
| Duration | : | 1-week (35 Hours) |
| Schedule | : | 21 Jul 2024 to 25 Jul 2024, 22 Sep 2024 to 26 Sep 2024,<br>24 Nov 2024 to 28 Nov 2024, 26 Jan 2025 to 30 Jan 2025,<br>09 Mar 2025 to 13 Mar 2025 and 04 May 2025 to 08 May 2025;<br>For Course no: 54, 55, 56, 57, 58 and 59 respectively. |
| Nomination deadline | : | 18 Jul 2024, 19 Sep 2024, 21 Nov 2024, 23 Jan 2025,<br>06 Mar 2025, and 30 Apr 2025;<br>For Course no: 54, 55, 56, 57, 58 and 59 respectively. |
| Number of Seats | : | 20 |
| Course fee | : | 3,500/- |
| Target Group | : | Entrepreneur, Technical staffs working in theindustries like Sugar Mills, Textiles, Power Plant passed at least Class eight pass/equivalent |
| Course Objects | : | • Skill development on Boiler;<br>• Hand on practice on maintenance of defferent circuits like fuel circuits, water circuit;<br>• Developing knowledge on Acts, rules and regulations;<br>• Awareness on Safety and maintenance. |
| Course Contents | : | • Water circuit<br>• Fuel circuit<br>• Boiler construction<br>• Boiler Maintenance<br>• Safety<br>• Troubleshooting<br>• Act, rules & regulations<br>• Inspection & regulations procedure<br>• Control system |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration |
| Evaluation System | : | • Observation<br>• Question and answer<br>• Oral test<br>• Overall performance. |

## 7. Skills for Industry Competitiveness and Innovation Program (SICIP), BITAC, Dhaka.

### 7.1 Factory Automation

| | | |
|---|---|---|
| Name of the Course | : | Factory Automation |
| Duration | : | 360 Hours |
| Schedule | : | 01 Jan 2025 |
| Application deadline | : | 31 Dec 2024, |
| Number of Seats | : | 20 |
| Course Fee | : | |
| Target Group | : | B.Sc. Engineering /Diploma Engineering / HSC (Vocational) / SSC (Vocational) / TTC / SSC or equivalent.<br>Age Limit: 18 to 45 Years |
| Course Objects | : | Automation is the technique that makes machine, plant and process to operate automatically. As industry becoming more and more sophisticated by applying automation, demanding more skill people who are capable to work both the engineering fields. Now days it is common to use electrical control system in mechanical engineering to reduce the cost and for robust and reliable operations. The goal of this course is to prepare the engineers and technician for respond the upcoming job market. |
| Course Contents | : | • To operate in a Self-Directed Team<br>• To communicate in English in the Workplace<br>• To apply Occupational Health & Safety(OHS)<br>• Practices in the Workplace<br>• Electrical Sequence Circuit & Control<br>• Basic Siemens PLC(SIMATIC-S7)<br>• Basic Omron PLC(SYSMAC)<br>• Basic LSIS PLC(XGK)<br>• Basic Mitsubishi PLC(MELSEC)<br>• PLC communication (SIMATIC/SYSMAC/ XGK/MELSEC)<br>• PLCPosition & ServoControl(SIMATIC/SYSMAC /XGK/MELSEC)<br>• PLC AD/DA & HSC (SIMATIC/SYSMAC/ XGK/MELSEC) |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration |
| Evaluation System | : | • Observation<br>• Question and answer<br>• Oral test<br>• Overall performance. |



### 7.2 Pneumatics & Hydraulics

| | | |
|---|---|---|
| Name of the Course | : | Pneumatics & Hydraulics |
| Duration | : | 360 Hours |
| Schedule | : | 01 Jan 2025 |
| Application deadline | : | 31 Dec 2024, |
| Number of Seats | : | 20 |
| Course Fee | : | |
| Target Group | : | B.Sc. Engineering /Diploma Engineering / HSC (Vocational) / SSC (Vocational) / TTC / SSC or equivalent.<br>Age Limit: 18 to 45 Years |
| Trade Objects | : | • To understand the principle of hydraulic and pneumatics system.<br>• To know how a hydraulic system work.<br>• To learn about the symbol and components of hydraulic and pneumatics system.<br>• To learn about hydraulic and pneumatics troubleshooting.<br>• To learn about hydraulic and pneumatics circuit.<br>• To design simple hydraulic and pneumatics circuit. |
| Course Contents | : | • Apply Occupational Health & Safety (OH&S) Practice in the workplace<br>• Perform Personal Computer (PC) Application<br>• Interpret Technical drawings and Manuals<br>• Carry Out Precision Checks and Measurements<br>• Apply Quality Systems and procedures<br>• Introduction to Factory Sequence ControlS<br>• Basic Pneumatic & Hydraulic Control<br>• Electrical Pneumatic & Hydraulic Control Application<br>• Pneumatic & Hydraulic Instruments Maintenance<br>• Proportional Hydraulic Control<br>• PLC Sensor & Motor Control<br>• PLC Machine Vision Control |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration |
| Evaluation System | : | • Observation<br>• Question and answer<br>• Oral test<br>• Overall performance. |

### 7.3 FMS (Flexible Manufacturing System)

| | | |
|---|---|---|
| Name of the Course | : | FMS (Flexible Manufacturing System) |
| Duration | : | 360 Hours |
| Schedule | : | 01 Jan 2025 |
| Application deadline | : | 31 Dec 2024 |
| Number of Seats | : | 20 |
| Course Fee | : | |
| Target Group | : | B.Sc. Engineering /Diploma Engineering / HSC (Vocational) / SSC (Vocational) / TTC / SSC or equivalent.<br>Age Limit: 18 to 45 Years |
| Course Objects | : | • To reduce setup and queue times.<br>• Produce mor e product more quickly<br>• Improve efficiency.<br>• Utilize human workers better<br>• Improve product routing<br>• Reduce time for product completion |
| Course Contents | : | • Apply Occupational Health & Safety (OH&S) Practice in the workplace<br>• Perform Personal Computer (PC) Application<br>• Interpret Technical drawings and Manuals<br>• Fundamental Electrical & Electronics<br>• Basic Sequence & PLC Control Programing<br>• Introduction to FMS<br>• Articulated Robot Disassembly/Assembly & Management<br>• PLC Sensor, Machine vision & Motor Control<br>• Hand-on FMSTotal Exercise (Robot Assembling Process)<br>• Industrial Articulated Robot Control Application)<br>• Mobile Robot Control Using Scratch Block Program<br>• Overview of MES & Smart Factory System |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration |
| Evaluation System | : | • Observation<br>• Question and answer<br>• Oral test<br>Overall performance. |



### 7.4 Additive Manufacturing

| | | |
|---|---|---|
| Name of the Course | : | Additive Manufacturing |
| Duration | : | 360 Hours |
| Schedule | : | 01 Jan 2025 |
| Application deadline | : | 31 Dec 2024 |
| Number of Seats | : | 20 |
| Course Fee | : | |
| Target Group | : | B.Sc. Engineering /Diploma Engineering / HSC (Vocational) / SSC (Vocational) / TTC / SSC or equivalent.<br>Age Limit: 18 to 45 Years |
| Trade Objects | : | • To design 3D object for 3D printing using CAD software.<br>• To install 3D printer and all necessary accessories.<br>• To troubleshoot common 3D printing issues.<br>• To use slicing software and learn G-code for 3d printers. |
| Course Contents | : | • Apply Occupational Health & Safety (OH&S) Practice in the workplace<br>• Perform Personal Computer (PC) Application<br>• Interpret Technical drawings and Manuals<br>• Basic AutoCAD & Solidworks Design(2D)<br>• Basic 3D Printer Application<br>• 3D Pinter Slicer SW Application<br>• 3D Printer Disassembly/Assembly & Maintenance Using Open Source<br>• Prototype Manufacture Using AutoCAD 3D Design & 3D Printer<br>• Prototype Manufacture Using SolidWorks 3D Design & 3D Printer<br>• 3D Printing Post Processing Using 3D Scanner & Printer (Case of Mold Manufacture)<br>• 3D Printing Post Machining Using 3D SW & Printer (Case of Spider Robot Manufacture)<br>• 3D Printing Post Machining/Processing Using Rhino 3D SW & Printer (Case of Architectural Miniature Manufacture) |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration |
| Evaluation System | : | • Observation<br>• Question and answer<br>• Oral test<br>• Overall performance. |

### 7.5 Autonomous Vehicle

| | | |
|---|---|---|
| Name of the Course | : | Autonomous Vehicle |
| Duration | : | 360 Hours |
| Schedule | : | 01 Jan 2025 |
| Application deadline | : | 31 Dec 2024 |
| Number of Seats | : | 20 |
| Course Fee | : | |
| Target Group | : | B.Sc. Engineering /Diploma Engineering / HSC (Vocational) / SSC (Vocational) / TTC / SSC or equivalent. Age Limit: 18 to 45 Years |
| Course Objects | : | • To learn autonomous vehicle image processing<br>• To learn driving system maintenance<br>• To learn autonomous vehicle control<br>• To learn Hands-free steering<br>• To learn Adaptive cruise control (ACC) down to a stop<br>• To learn Lane-centering steering<br>• To develop skill manpower |
| Course Contents | : | • Apply Occupational Health & Safety (OH&S) Practice in the workplace<br>• Perform Personal Computer (PC) Application<br>• Interpret Technical drawings and Manuals<br>• Carry Out Precision Checks and Measurements<br>• Fundamental of Autonomous Vehicle<br>• Path tracking algorithm for autonomous vehicles<br>• Introduction to Autonomous Vehicle Control<br>• Introduction to Autonomous Vehicle ADASSensor<br>• Introduction to Autonomous Vehicle Communication (CAN, LIN)<br>• Autonomous Vehicle Radar/Lidar Sensor<br>• Hybrid/Autonomous Vehicle Communication System Maintenance<br>• Hybrid/Autonomous Vehicle Convenience & Driving System Maintenance<br>• Autonomous Vehicle Embedded System Programing<br>• Autonomous Vehicle Image Processing |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration |
| Evaluation System | : | • Observation<br>• Question and answer<br>• Oral test<br>• Overall performance. |



### 7.6 Autonomous Drone Application

| | | |
|---|---|---|
| Name of the Course | : | Autonomous Drone Application |
| Duration | : | 360 Hours |
| Schedule | : | 01 Jan 2025 |
| Application deadline | : | 31 Dec 2024 |
| Number of Seats | : | 20 |
| Course Fee | : | |
| Target Group | : | B.Sc. Engineering /Diploma Engineering / HSC (Vocational) / SSC (Vocational) / TTC / SSC or equivalent.<br>Age Limit: 18 to 45 Years |
| Trade Objects | : | • To learn basic drone navigation<br>• To learn basic drone photographing<br>• To learn drone control system<br>• To learn IoT programming based on Arduin<br>• To develop skill manpower |
| Course Contents | : | • Apply Occupational Health & Safety (OH&S) Practice in the workplace<br>• Perform Personal Computer (PC) Application<br>• Interpret Technical drawings and Manuals<br>• Carry Out Precision Checks and Measurements<br>• Fundamental of Drone technology<br>• Aviation Regulation & Aviation Regulation Simulation Practice<br>• Basic Drone Navigation<br>• Basic Drone Photographing<br>• Basic IoT Programing Based on Arduino<br>• Drone Video Photographing(Documentary Type)<br>• Drone Navigation and Photographing(Rotation Wings)<br>• Drone Navigation and Photographing(Fixed Wings)<br>• Drone Control & Navigation Using Arduino Programing<br>• Drone Navigation and VR $360^0$ Photographing |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration |
| Evaluation System | : | • Observation<br>• Question and answer<br>• Oral test<br>• Overall performance. |

### 7.7 Alternative Energy

| | | |
|---|---|---|
| Name of the Course | : | Alternative Energy |
| Duration | : | 360 Hours |
| Schedule | : | 01 Jan 2025 |
| Application deadline | : | 31 Dec 2024 |
| Number of Seats | : | 20 |
| Course Fee | : | Free |
| Target Group | : | B.Sc. Engineering /Diploma Engineering / HSC (Vocational) / SSC (Vocational) / TTC / SSC or equivalent.<br>Age Limit: 18 to 45 Years |
| Course Objects | : | • To learn solar photovoltaic plant design<br>•To learn fundamental of alternative energy<br>•To learn wind power plant management & maintenance<br>•Fresh skilled workforce can fill the skills gap.<br>•Meets our local & oversees demand by re-skilling and up-skilling training. |
| Course Contents | : | • Apply Occupational Health & Safety (OH&S) Practice in the workplace<br>• Perform Personal Computer (PC) Application<br>• Interpret Technical drawings and Manuals<br>• Carry Out Precision Checks and Measurements<br>• Fundamental Alternative Energy<br>• Solar Photovoltaic Fundamental Practice<br>• Wind Power Generation Fundamental Practice<br>• Solar Photovoltaic Module/Inverter & Distribution System Link<br>• SAPV/BIPV System & Plant Maintenance<br>• Wind Power Control Using HILS & WindSIM<br>• Solar Photovoltaic Plant Design Using Ecotect & Solar Pro<br>• Wind Power Plant Management & Maintenance |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Group discussion |
| Evaluation System | : | • Observation<br>• Question and answer<br>• Oral test<br>• Overall performance. |



### 7.8 Electrical & Electronics Design

| | | |
|---|---|---|
| Name of the Course | : | Electrical & Electronics Design |
| Duration | : | 360 Hours |
| Schedule | : | 01 Jan 2024 to 28 Mar 2024, 28 Apr to 25 Jul 2024,<br>For Batch no:1st and 2nd respectively. |
| Application deadline | : | 21 Dec 2023, 18Apr 2024.<br>For Batch no:1st and 2nd respectively. |
| Number of Seats | : | 20 |
| Course Fee | : | |
| Target Group | : | B.Sc. Engineering /Diploma Engineering / HSC (Vocational) / SSC (Vocational) / TTC / SSC or equivalent.<br>Age Limit: 18 to 45 Years |
| Trade Objects | : | • To learn electronics circuit schematic work.<br>• To learn CAD- electrical design application<br>• To learn PCB Artwork Using OrCAD Layout<br>• Fresh skilled workforce can fill the skills gap.<br>• Meets our local & oversees demand by re-skilling and up -skilling training. |
| Course Contents | : | • Apply Occupational Health & Safety (OH&S) Practice in the workplace<br>• Perform Personal Computer (PC) Application<br>• Interpret Technical drawings and Manuals<br>• Carry Out Precision Checks and Measurements<br>• Fundamental Electrical & Electronics<br>• Electronics Circuit(Level-1)<br>• Electronics Circuit Schematic Work Using Altium Designer<br>• Electrical Drawing Work Using AutoCAD-Electrical<br>• Electronics Circuit Schematic Work Using orCAD Capture<br>• Electronics Circuit(Level-2)<br>• PCB Artwork Using Altium Designer<br>• AutoCAD-Electrical Design Application<br>• PCB Artwork Using or CAD Layout<br>• Electronics Circuit Simulation Modeling Using PSPICE<br>• Electrical Facilities Design Using E-PLAN |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration |
| Evaluation System | : | • Observation<br>• Question and answer<br>• Oral test<br>• Overall performance. |

### 7.9 Electrical Machine

| | | |
|---|---|---|
| Name of the Course | : | Electrical Machine |
| Duration | : | 360 Hours |
| Schedule | : | 01 Jan 2025 |
| Application deadline | : | 31 Dec 2025 |
| Number of Seats | : | 20 |
| Course Fee | : | |
| Target Group | : | B.Sc. Engineering /Diploma Engineering / HSC (Vocational) / SSC (Vocational) / TTC / SSC or equivalent.<br>Age Limit: 18 to 45 Years |
| Course Objects | : | • Capable of utilizing the latest knowledge and technique in electrical machine<br>• To learn electrical instrument design, manufacture & maintenance<br>• To learn electrical instrument control<br>• Fresh skilled workforce can fill the skills gap.<br>• Meets our local & oversees demand by re-skilling and up-skilling training. |
| Course Contents | : | • Apply Occupational Health & Safety (OH&S) Practice in the workplace<br>• Perform Personal Computer (PC) Application<br>• Interpret Technical drawings and Manuals<br>• Carry Out Precision Checks and Measurements<br>• Fundamental Electrical Instrument<br>• Electrical Instrument Disassembly & Assembly<br>• Electrical Instrument Manufacture(Level-1) (Single Phase Induction Motor Coil Winding)<br>• Electrical Instrument Manufacture(Level-2) (3-Phase Induction Motor & Transformer Coil Winding)<br>• Electrical Instrument Control(Level-1) (DC Machine)<br>• Electrical Instrument Control(Level-2) (Inductive/ Synchronous Machine & Transformer)<br>• Electrical Instrument Design Exemplification & Maintenance(Explosion-Proof Type) |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration |
| Evaluation System | : | • Observation<br>• Question and answer<br>• Oral test<br>• Overall performance. |



### 7.10 Electrical Facilities

| | | |
|---|---|---|
| Name of the Course | : | Electrical Facilities |
| Duration | : | 360 Hours |
| Schedule. | : | 01 Jan 2025 |
| Application deadline | : | 31 Dec 2024 |
| Number of Seats | : | 20 |
| Course Fee | : | |
| Target Group | : | B.Sc. Engineering /Diploma Engineering / HSC (Vocational) / SSC (Vocational) / TTC / SSC or equivalent.<br>Age Limit: 18 to 45 Years |
| Trade Objects | : | • Increase use of intelligence device in new commercial, residential & industrial wiring & instrumentation.<br>• Capable of utilizing the latest knowledge and technique in electrical installation and maintenance.<br>• Fresh skilled workforce can fill the skills gap.<br>• Meets our local & oversees demand by re-skilling and up -skilling training. |
| Course Contents | : | • Apply Occupational Health & Safety (OH&S) Practice in the workplace<br>• Perform Personal Computer (PC) Application<br>• Interpret Technical drawings and Manuals<br>• Carry Out Precision Checks and Measurements<br>• Basic Electric Work<br>• Electric Plumbing Work<br>• Electric Wiring Work<br>• Electric Power Control Panel Work with Sequence Circuit(Level-1)<br>• Electrical Instrument Control(Level-2) (Inductive/ Synchronous Machine & Transformer)<br>• Low Voltage Electric Installation Management<br>• Electric Power Panel Management<br>• Power Transmission System<br>• Power Distribution System |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration |
| Evaluation System | : | • Observation<br>• Question and answer<br>• Oral test<br>• Overall performance. |

### 7.11 Machine Shop Practice

| | | |
|---|---|---|
| Name of the Course | : | Machine Shop Practice |
| Duration | : | 360 Hours |
| Schedule | : | 01 Jan 2025 |
| Application deadline | : | 31Dec 2024 |
| Number of Seat | : | 20 |
| Course Fee | : | |
| Target Group | : | Minimum Qualification: JSC pass or Equivalent<br>Age Limit: 18 to 45 Years |
| Trade Objects | : | • To perform Computations Using Basic Mathematical Concepts<br>• To apply Occupational Health and Safety (OHS) Practices in the Workplace<br>• To communicate in English in the Workplace<br>• To operate in a Self-Directed Team<br>• To interpret Technical Drawings and Plans<br>• To work with Mechanical Hand and Power Tools<br>• To carry Out Precision Checks and Measurements<br>• To apply Quality System and procedures<br>• Carryout Bench Working Operations<br>• To perform Drilling, Lathe, Milling, Shaper and Precision Grinding Machine Operations |
| Course Contents | : | • To operate in a Self Directed Team<br>• To communicate in English in the Workplace<br>• To perform Computations Using Basic Mathematical Concepts<br>• To apply Occupational Health & Safety(OHS) Practices in the Workplace<br>• To interpret Technical Drawing & Plans<br>• To work With Mechanical Hand & Power Tools<br>• Carry Out Precision Checks & Measurements<br>• To apply Quality System and Procedures |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration |
| Evaluation System | : | • Observation<br>• Question and answer<br>• Oral test<br>• Overall performance. |



### 7.12 CAD-CAM Lathe and Milling

| | | |
|---|---|---|
| Name of the Course | : | CAD-CAM Lathe and Milling |
| Duration | : | 360 Hours |
| Schedule | : | 01 Jan 2024 |
| Application deadline | : | 31 Dec 2024 |
| Number of Seats | : | 20 |
| Course Fee | : | |
| Target Group | : | B.Sc. Engineering /Diploma Engineering / HSC (Vocational) / SSC (Vocational) / TTC / SSC or equivalent.<br>Age Limit: 18 to 45 Years |
| Trade Objects | : | • To understand the principle of CNC milling/lathe operation<br>• To know how to operate CNC milling/lathe operation<br>• To learn CNC basic programming<br>• To know how to reduce machining time<br>• To design product in software and cut in machine |
| Course Contents | : | • Apply Occupational Health & Safety (OH&S) Practice in the workplace<br>• Perform Personal Computer (PC) Application<br>• Interpret Technical drawings and Manuals<br>• Carry Out Precision Checks and Measurements<br>• Perform CNC Lathe operation<br>• Perform CNC machining center operation<br>• Create a model using CAD software<br>• Apply CAM for computer-aided machining<br>• Perform multi-axis machining |
| Training Methodology | : | • Class-room lecture<br>• Group discussion<br>• Practical exercise<br>• Demonstration |
| Evaluation System | : | • Observation<br>• Question and answer<br>• Oral test<br>• Overall performance. |

8. Accelerating and Strengthening Skills for Economic Transformation (ASSET).

8.1 BITAC-Dhaka, Chattogram & Chandpur.

| Sl. No. | Name of the Course | Schedule | Duration (Hours) | No. of seats | Course Fee |
|---|---|---|---|---|---|
| 1 | Electrical Installation & Maintenance | 01 Sep'24 to 31 Dec'24<br>01 Jan'25 to 30 Apr'25<br>04 May'25 to 30 Aug'25 | 360 | 20 | Free |
| 2 | Welding | 01 Sep'24 to 31 Dec'24<br>01 Jan'25 to 30 Apr'25<br>04 May'25 to 30 Aug'25 | 360 | 20 | Free |
| Target Group | | Candidate having SSC or equivalent certificate along with technical experience, TTC/VTI certificate holders, Diploma in Engineering. | | | |

**8.2 BITAC-**& Bogura.

| Sl. No. | Name of the Course | Schedule | Duration (Hours) | No. of seats | Course Fee |
|---|---|---|---|---|---|
| 1 | Refrigeration & Air Conditioning | 01 Sep'24 to 31 Dec'24<br>01 Jan'25 to 30 Apr'25<br>04 May'25 to 30 Aug'25 | 360 | 20 | Free |
| 2 | Boiler Operation & Maintenance | 01 Sep'24 to 31 Dec'24<br>01 Jan'25 to 30 Apr'25<br>04 May'25 to 30 Aug'25 | 360 | 20 | Free |
| Target Group | | Candidate having SSC or equivalent certificate along with technical experience, TTC/VTI certificate holders, Diploma in Engineering. | | | |

**8.3 BITAC, Khulna**

| Sl. No. | Name of the Course | Schedule | Duration (Hours) | No. of seats | Course Fee |
|---|---|---|---|---|---|
| 1 | Electrical Installation & Maintenance | 01 Sep'24 to 31 Dec'24<br>01 Jan'25 to 30 Apr'25<br>04 May'25 to 30 Aug'25 | 360 | 20 | Free |
| 2 | Machine Shop Practice | 01 Sep'24 to 31 Dec'24<br>01 Jan'25 to 30 Apr'25<br>04 May'25 to 30 Aug'25 | 360 | 20 | Free |
| Target Group | | Candidate having SSC or equivalent certificate along with technical experience, TTC/VTI certificate holders, Diploma in Engineering. | | | |



**9. Self-Employment and Poverty Alleviation (SEPA), Phase-2, BITAC.**

**9.1 BITAC, Dhaka. ( For Female )**

| S.l No. | Name of the Course | Schedule | No. of Seats/ Course | Course Fee |
|---|---|---|---|---|
| 1 | Machine Shop | From 01 Jul 2024 to 30 Sep 2024 for the 13th batch<br>From 01 Oct 2024 to 31 Dec 2024 for the 14th batch<br>From 01 Jan 2025 to 31 Mar 2025 for the 15th batch<br>From 01 Apr 2025 to 30 Jun 2025 for the 16th batch | 30 | Free |
| 2 | Mobile Servicing | | | |
| 3 | Electrical Maintenance | | | |
| 4 | Refrigeration & Air conditioning | | | |
| 5 | Auto CAD | | | |
| 6 | House Hold Appliance Maintenance | | | |
| 7 | Handicraft | | | |
| 8 | Plastic Processing (General) | | | |
| 9 | Plastic Processing (Customized) | | | |
| Target Group | | Minimum 8th/ JSC pass and Age Limit:18 to 30 Years | | |

**9.2 BITAC, Dhaka. (For Male)**

| S.l No. | Name of the Course | Schedule | No. of Seats/ Course | Course Fee |
|---|---|---|---|---|
| 1 | Machine Shop | From 01 Jul 2024 to 30 Sep 2024 for the 13th batch<br>From 01 Oct 2024 to 31 Dec 2024 for the 14th batch<br>From 01 Jan 2025 to 31 Mar 2025 for the 15th batch<br>From 01 Apr 2025 to 30 Jun 2025 for the 16th batch | 30 | Free |
| 2 | Electronics | | | |
| 3 | Electrical Maintenance | | | |
| 4 | Refrigeration & Air conditioning | | | |
| 5 | Auto CAD | | | |
| 6 | Computer Hardware Maintenance | | | |
| 7 | Welding | | | |
| | Target Group | Minimum 8th/ JSC pass and Age Limit:18 to 30 Years | | |

**9.3 BITAC, Chattogram, Khulna and Bogura. (For Male)**

| S.l No. | Name of the Course | Schedule | No. of Seats/ Course | |
|---|---|---|---|---|
| 1 | Welding (Arc & Gas) | From 01 Jul 2024 to 30 Sep 2024 for the 13th batch<br>From 01 Oct 2024 to 31 Dec 2024 for the 14th batch<br>From 01 Jan 2025 to 31 Mar 2025for the 15th batch<br>From 01 Apr 2025 to 30 Jun 2025 for the 16th batch | 30 | Course Fee<br><br><br><br>Free |
| 2 | Electrical Maintenance | | | |
| 3 | Refrigeration & Air conditioning | | | |
| Target Group | | Minimum 8th/ JSC pass and Age Limit:18 to 30 Years | | |

### 9.4 BITAC, Chattogram, Khulna and Bogura. (For Male)

| S.l No. | Name of the Course | Schedule | No. of Seats/ Trade/Batch | Course Fee |
|---|---|---|---|---|
| | Mobile Servicing | From 01 Jul 2024 to 30 Sep 2024 for the 13th batch<br>From 01 Oct 2024 to 31 Dec 2024 for the 14th batch<br>From 01 Jan 2025 to 31 Mar 2025 for the 15th batch<br>From 01 Apr 2025 to 30 Jun 2025 for the 16th batch | 30 | Free |
| | Electrical Maintenance | | | |
| | Refrigeration & Air conditioning | | | |
| Target Group | | Minimum 8th/ JSC pass and Age Limit: 18 to 30 Years | | |

### 9.5 BITAC, Chandpur. (For Male)

| S.l No. | Name of the Course | Schedule | No. of Seats/ Course | Course Fee |
|---|---|---|---|---|
| | Welding (Arc & Gas) | From 01 Jul 2024 to 30 Sep 2024 for the 13th batch<br>From 01 Oct 2024 to 31 Dec 2024 for the 14th batch<br>From 01 Jan 2025 to 31 Mar 2025 for the 15th batch<br>From 01 Apr 2025 to 30 Jun 2025 for the 16th batch | 30 | Free |
| | Machine Shop | | | |
| | Electrical Maintenance | | | |
| Target Group | | Minimum 8th/ JSC pass and Age Limit: 18 to 30 Years | | |



## 10. BITAC, Chattogram.

### 10.1 Long Term Technical Training Program (Regular)

| Sl. No. | Name of the Course | Course No. | Schedule | Practicing (Weeks) | No. of seats | Course Fee |
|---|---|---|---|---|---|---|
| 1 | Machine Shop | 173<br>174<br>175<br>176 | 07 July 2024 to 10 Oct 2024<br>20 Oct 2024 to 23 Jan 2025<br>26 Jan 2025 to 01 May 2025<br>04 May 2025 to 07 Aug 2025 | 14 | 10 | 5,000/= |
| 2 | Electrical Maintenance | 173<br>174<br>175<br>176 | 07 July 2024 to 10 Oct 2024<br>20 Oct 2024 to 23 Jan 2025<br>26 Jan 2025 to 01 May 2025<br>04 May 2025 to 07 Aug 2025 | 14 | 20 | 8,000/= |
| 3 | Welding | 173<br>174<br>175<br>176 | 07 July 2024 to 10 Oct 2024<br>20 Oct 2024 to 23 Jan 2025<br>26 Jan 2025 to 01 May 2025<br>04 May 2025 to 07 Aug 2025 | 14 | 20 | 7,500/= |
| 4 | Machine Maintenance | 173<br>174<br>175<br>176 | 07 July 2024 to 10 Oct 2024<br>20 Oct 2024 to 23 Jan 2025<br>26 Jan 2025 to 01 May 2025<br>04 May 2025 to 07 Aug 2025 | 14 | 10 | 5,000/= |

### 10.2 Customized Technical Training Program.

| Sl. No. | Name of the Course | Schedule | Duration (Weeks) | No. of seats | Course Fee |
|---|---|---|---|---|---|
| 1 | Auto CAD (2D & 3D) | As per Discussion | 6 | 6 | 5,000/= |

### 10.3 Long Term Technical Training Program (Customized)

| Sl. No. | Name of the Course | Course No. | Duration | Duration (Hours) | No. of seats | Course Fee |
|---|---|---|---|---|---|---|
| 1 | Refrigeration & Air Conditioning | As per Demend | As per Discussion | 360 | 10 | 5,000/= |

## 11. BITAC, Chandpur, Khulna & Bogura

### Long Term Technical Training Program (Regular)

| Sl. No. | Name of the Course | Course No. | Schedule | Practicing (Weeks) | No. of seats | Course Fee |
|---|---|---|---|---|---|---|
| 1 | Machine Shop | 173<br>174<br>175<br>176 | 07 July 2024 to 10 Oct 2024<br>20 Oct 2024 to 23 Jan 2025<br>26 Jan 2025 to 01 May 2025<br>04 May 2025 to 07 Aug 2025 | 14 | 10 | 5,000/= |
| 2 | Electrical Maintenance | 173<br>174<br>175<br>176 | 07 July 2024 to 10 Oct 2024<br>20 Oct 2024 to 23 Jan 2025<br>26 Jan 2025 to 01 May 2025<br>04 May 2025 to 07 Aug 2025 | 14 | 20 | 8,000/= |
| 3 | Welding | 173<br>174<br>175<br>176 | 07 July 2024 to 10 Oct 2024<br>20 Oct 2024 to 23 Jan 2025<br>26 Jan 2025 to 01 May 2025<br>04 May 2025 to 07 Aug 2025 | 14 | 20 | 7,500/= |

## 12. Tool & Technology Institute (TTI), BITAC.

### 12.1Training Program (ASSET & Regular)

| Sl. No. | Name of the Course | Course Type | Schedule | Duration (Hours) | No. of seats | Course Fee |
|---|---|---|---|---|---|---|
| 1. | CNC Machine Operation | ASSET | 01 Sept 2024 to 31Dec 2024<br>01 Jan 2025 to 30 Apr 2025<br>04 May 2025 to 30 Aug 2025 | 360<br>360<br>360 | 25<br>25<br>25 | Free |
| 2. | Programmable Logic Controller (PLC) | ASSET | 01 Sept 2024 to 31Dec 2024<br>01 Jan 2025 to 30 Apr 2025<br>04 May 2025 to 30 Aug 2025 | 360<br>360<br>360 | 25<br>25<br>25 | Free |
| 3. | Mechatronics | ASSET | 01 Sept 2024 to 31Dec 2024<br>01 Jan 2025 to 30 Apr 2025<br>04 May 2025 to 30 Aug 2025 | 360<br>360<br>360 | 25<br>25<br>25 | Free |
| 4. | CNC Machining Centre Operation With CAD & CAM | Regular | 21 Jul 2024 to 17 Oct 2024<br>20 Oct2024 to 20 jan 2025<br>26 Jan 2025 to 30 Apr 2025<br>04 May 2025 to 30 Jul 2025 | 360<br>360<br>360<br>360 | 20<br>20<br>20<br>20 | 10,000/= |
| 5. | Programmable Logic Controller (PLC) | Regular | 21 Jul 2024 to 17 Oct 2024<br>20 Oct2024 to 20 jan 2025<br>26 Jan 2025 to 30 Apr 2025<br>04 May 2025 to 30 Jul 2025 | 360<br>360<br>360<br>360 | 20<br>20<br>20<br>20 | 10,000/= |

### 12.2 Customized Technical Training Program.

| Sl. No. | Name of the Course | Schedule | No. of seats | Course Fee |
|---|---|---|---|---|
| 1 | Solid Works | As per Discussion | 10 | 7,500/- |
| 2 | Intermediate Automation and Control System/PLC | | | |
| 3 | 3D printing with CAD | | | |
| 4 | EDM & EDM Wire cut Machine operation | | | |
| 5 | Wood Router | | | |



### 12.3 CNC Machine Operation (ASSET)

| | | |
|---|---|---|
| Name of the Course | : | CNC Machine Operation |
| Duration | : | 360 Hours |
| Schedule | : | 01 Sept 2024 to 31Dec 2024, 01 Jan 2025 to 30 Apr 2025, 04 May 2025 to 30 Aug 2025 |
| Nomination deadline | : | 29 Aug 2024, 26 Dec 2024 and 27 Feb 2025 |
| Number of Seates | : | 25 |
| Course fee | : | Free |
| Target Group | : | Candidate having B.Sc./Diploma in engineering or equivalent. For technical experience, educational qualification might be compromised. |
| Course object | : | • To understand the principle of CNC milling operations.<br>• To know how to operate a CNC machine<br>• To learn CNC basic programming.<br>• To know how to reduce machining time<br>• To design particular part and develop in machine.<br>• To design product in software and cut in machine. |
| Course Contents | : | • Safety<br>• Machine operating<br>• Manual programming with G&M codes<br>• Mechanical Drawing<br>• Solid works<br>• Mastercam 2D programming<br>• Mastercam 3D programming |
| Training Methodology | : | • Theory Classes<br>• Demonstration<br>• Practice on machine<br>• Daily evaluation<br>• Motivational session |
| Evaluation System | : | • Participation in the session<br>• Oral test<br>• Written test<br>• Evidence guides<br>• Practical examination |

## 12.4 Mechatronics (ASSET)

| | | |
|---|---|---|
| Name of the Course | : | Mechatronics |
| Duration | : | 360 Hours |
| Schedule | : | 01 Sept 2024 to 31Dec 2024, 01 Jan 2025 to 30 Apr 2025, 04 May 2025 to 30 Aug 2025 |
| Nomination deadline | : | 29 Aug 2024, 26 Dec 2024 and 27 Feb 2025 |
| Number of Seates | : | 25 |
| Course fee | : | Free |
| Target Group | : | Candidate having B.Sc/Diploma in engineering or equivalent. For technical experience educational qualification might be compromised. |
| Course object | : | • To understand the principle of Mechatronics and its application<br>• To know the application of PLC.<br>• To know various sensors and actuator and its application.<br>• To understand the industrial application of hydraulic and pneumatics<br>• To understand the application of Automation |
| Course Contents | : | • Pneumatic system<br>• Electro-pneumatic system<br>• Mechanical power transmission system<br>• Basic hydraulic and hydraulic control system<br>• Hydraulic circuit and Electro-hydraulic<br>• Programmable Logic Control (PLC)<br>• Sensor & Instrumentation<br>• Introduction to Micro-Controller |
| Training Methodology | : | • Theory Classes<br>• Demonstration<br>• Practice on machine<br>• Daily evaluation<br>• Motivational session |
| Evaluation System | : | • Participation in the session<br>• Oral test<br>• Written test<br>• Evidence guides<br>• Practical examination |



01 Sept 2024 to 31Dec 2024, 01 Jan 2025 to 30 Apr 2025,
04 May 2025 to 30 Aug 2025

## 12.5 Programmbale Logic Controller (PLC) (ASSET)

| | | |
|---|---|---|
| Name of the Trade | : | Programmbale Logic Controller (PLC) |
| Duration | : | 360 Hours |
| Schedule | : | 01 Sept 2024 to 31Dec 2024, 01 Jan 2025 to 30 Apr 2025, 04 May 2025 to 30 Aug 2025 |
| Nomination deadline | : | 29 Aug 2024, 26 Dec 2024 and 27 Feb 2025 |
| Number of Seats | : | 25 |
| Trade fee | : | Free |
| Target Group | : | Candidate having B.Sc./Diploma in engineering or equivalent. For technical experience, educational qualification might be compromised. |
| Course object | : | • To understand the principle of Mechatronics and its application.<br>• To know the application of PLC.<br>• To know various sensors and actuator and its application.<br>• To understand the industrial application of hydraulic and pneumatics.<br>• To understand the application of Automation |
| Course Contents | : | • Pneumatic system<br>• Electro-pneumatic system<br>• Mechanical power transmission system<br>• Basic hydraulic and hydraulic control system<br>• Hydraulic circuit and Electro-hydraulic<br>• Programmable Logic Control (PLC)<br>• Sensor & Instrumentation<br>• Introduction to Micro-Controller |
| Training Methodology | : | • Theory Classes<br>• Demonstration<br>• Practice on machine<br>• Daily evaluation<br>• Motivational session |
| Evaluation System | : | • Participation in the session<br>• Oral test<br>• Written test<br>• Evidence guides<br>• Practical examination |

## 12.6 CNC Machining Centre Operation with CAD & CAM ( Regular)

| | | |
|---|---|---|
| Name of the Trade | : | CNC Machining Centre Operation with CAD & CAM ( Regular) |
| Duration | : | 360 Hours |
| Schedule | : | 21 Jul 2024 to 17 Oct 2024, 20 Oct 2024 to 20 jan 2025, 26 Jan 2025 to 30 Apr 2025,04 May 2025 to 30 Jul 2025 |
| Nomination deadline | : | 11 Jul 2024, 10 Oct 2024,16 Jan 2025 and 24 Apr 2025 |
| Number of Seats | : | 20 |
| Course fee | : | 10,000/- |
| Target Group | : | Candidate having B.Sc/Diploma in engineering or equivalent. For technical experience educational qualification might be compromised. |
| Course Objects | : | • To understand the principle of CNC Milling operations.<br>• To know how to operate a CNC Milling machine.<br>• To learn CNC Milling basic programming.<br>• To know how to reduce machining time.<br>• To design particular part and develop in machine.<br>• To design product in software and cut in machine. |
| Course Contents | : | • Safety<br>• Machine operating<br>• Manual programming with G&M codes<br>• Mechanical Drawing<br>• Solid works<br>• Master CAM 2D programming<br>• Master CAM 3D programming |
| Training Methodology | : | • Theory Classes<br>• Demonstration<br>• Practice on machine<br>• Daily evaluation<br>• Motivational session |
| Evaluation System | : | • Participation in the session<br>• Oral test<br>• Written test<br>• Evidence guides<br>• Practical examination |



## 12.7 Programmbale Logic Controller (PLC) (Regular)

| | | |
|---|---|---|
| Name of the Trade | : | Programmbale Logic Controller (PLC) |
| Duration | : | 360 Hours |
| Schedule | : | 21 Jul 2024 to 17 Oct 2024, 20 Oct 2024 to 20 Jan 2025, 26 Jan 2025 to 30 Apr 2025 and 04 May 2025 to 30 Jul 2025 |
| Nomination deadline | : | 11 Jul 2024, 10 Oct 2024, 16 Jan 2025, 24 Apr 2025 |
| Number of Seats | : | 20 |
| Trade fee | : | Free |
| Target Group | : | Candidate having B.Sc./Diploma in engineering or equivalent. For technical experience, educational qualification might be compromised. |
| Course object | : | • To understand the principle of Mechatronics and its application.<br>• To know the application of PLC.<br>• To know various sensors and actuator and its application.<br>• To understand the industrial application of hydraulic and pneumatics.<br>• To understand the application of Automation |
| Course Contents | : | • Pneumatic system<br>• Electro-pneumatic system<br>• Mechanical power transmission system<br>• Basic hydraulic and hydraulic control system<br>• Hydraulic circuit and Electro-hydraulic<br>• Programmable Logic Control (PLC)<br>• Sensor & Instrumentation<br>• Introduction to Micro-Controller |
| Training Methodology | : | • Theory Classes<br>• Demonstration<br>• Practice on machine<br>• Daily evaluation<br>• Motivational session |
| Evaluation System | : | • Participation in the session<br>• Oral test<br>• Written test<br>• Evidence guides<br>• Practical examination |

## 13. INDUSTRIAL ATTACHMENT TECHNICAL TRAINING PROGRAM, BITAC- Dhaka. Chattogrom, Khulna, Bogra, Chandpur and TTI.

| | | |
|---|---|---|
| Name of the Trade | : | Industrial Attachment Technical Training Program |
| Duration | : | Depends on the participating Institute |
| Schedule | : | At any time of the year depending on the participating Institute |
| Nomination deadline | : | Depends on the participating Institute |
| Number of Seates | : | As per demand |
| Course fee | : | As per Govt. rule depending on the sending Institute |
| Target Group | : | All the public and private technical Universities, Polytechnic Institute, TTC etc. |
| Course Objects | : | • Introducing different conventional machine tools such as lathe, milling, grinding planer, boring, shaper, shearing, drilling, ball press, power press etc and CNC & Servo Control machine tools such as lathe, milling center, die sink EDM, & wire cut EDM.<br>• Comparing theoritical and practical operaton systems of different traditional and CNC machine tool to develop spare parts or products,<br>• Acquainting with different melting and heat treatment furnaces and their operation system and also different surface treatment including protective coating;<br>• To make adapted in real life situation<br>• Understanding estimation and controlling production system.<br>• Rendering practical know-how on plastic processing technology.<br>• Introducing 3D printing operation. |
| Course Contents | : | • Welding and Fabrication<br>• Conventional Machine Tool-lathe, milling grinder, planer, boring, shaper, shearing, drilling, ball press and power press machine etc.<br>• CNC Machine Tool-lathe, milling, machining center & wire cut EDM.<br>• Special Machine Tool-Copy milling, pantograph milling, profile grinder, jig Boring & jig Grinding, servo control die sink EDM<br>• Tool and Cutter Grinding,<br>• Light Forging,<br>• Heat-Treatment<br>• Patten,<br>• Foundry |
| Training Methodolog | : | • Group discussion<br>• Practical exercise<br>• Case study. |
| Evaluation System | : | • Group exercise<br>• Individual exercise<br>• Discussion<br>• Oral test<br>• Overall performance. |