Model Curriculum

QP Name: Assistant House Wireman and Motor Winder

QP Code: STC -CON/NSQF -2022 /0805

QP Version: 2.0

NSQF Level: 3

Model Curriculum Version: 2.0

West Bengal State Council of Technical & Vocational Education and Skill Development, Karigari Bhavan, (5th Floor), Plot-B/7, Action Area-III, New Town, Kolkata-700160

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Training Parameters

Sector	Construction
Sub-Sector	Distribution
Occupation	Assistant House Wireman and Motor Winder
Country	India
NSQF Level	3
Aligned to NCO/ISCO/ISIC Code	7411.0301, 7421.0701
Minimum Educational Qualification and Experience	1. Class 10 Pass OR 2. Class 9 pass and pursuing continuous regular schooling, OR 3. Class 8 Pass with 2 year experience, OR 4. Class 8 Pass with NTC/NAC (2yrs) in Electrician / wireman Trade OR 5. Previous relevant qualification of NSQF Level 2.5 with 1 yr experience
Pre-Requisite License or Training	
Minimum Job Entry Age	18 Years
Last Reviewed On	05.01.2023
Next Review Date	04.01.2026
Version	2.0
NSQC Approval Date	05.01.2023
Model Curriculum Creation Date	05.01.2023
Model Curriculum Valid Upto Date	04.01.2026
Model Curriculum Version	2.0
Minimum Duration of the Course	600 hours
Maximum Duration of the Course	600 hours

Program Overview

This section summarizes the end objectives of the program along with its duration.

Training Outcomes

At the end of the program, the participants will be able to:

- Apply Safe Working Practices
- Make electrical wire joints & soldering
- Analyse, demonstrate and test basic electrical connection
- Plan and prepare Earthing installation
- Assemble, install and test wiring system
- Plan and execute electrical illumination system
- Perform winding for armature of a ceiling fan / table fan
- Work in real job situation with special emphasis on basic safety and hazards in this domain.
- Employability Skills

Compulsory Modules

The table lists the modules and their duration corresponding to the Compulsory NOS of the QP.

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
CON/0805/OC1 Apply Safe Working Practices NOS Version No.: 2.0 NSQF Level: 3	**10:00 Hours**	**20:00 Hours**	**00:00Hours**	**00:00Hours**	**30:00 Hours**
Module1: Apply Safe Working Practices	10:00 Hours	20:00 Hours	00:00Hours	00:00Hours	30:00 Hours
CON/0805/OC2 Make electrical wire joints & soldering NOS Version No. :2.0 NSQF Level:3	**10:00 Hours**	**20:00 Hours**	**00:00Hours**	**00:00Hours**	**30:00 Hours**

Module2: Make electrical wire joints & soldering	10:00 Hours	20:00 Hours	00:00Hours	00:00Hours	30:00 Hours
CON/0805/OC3 Analyse, demonstrate and test basic electrical connection NOS Version No.:2.0 NSQF Level: 3	**10:00 Hours**	**20:00 Hours**	**00:00Hours**	**00:00Hours**	**30:00 Hours**
Module3: Analyse, demonstrate and test basic electrical connection	10:00 Hours	20:00 Hours	00:00Hours	00:00Hours	30:00 Hours
CON/0805/OC4 Plan and prepare Earthing installation NOS Version No.:2.0 NSQF Level:3	**20:00 Hours**	**40:00 Hours**	**00:00Hours**	**00:00Hours**	**60:00 Hours**
Module 4: Plan and prepare Earthing installation	20:00 Hours	40:00 Hours	00:00Hours	00:00Hours	60:00 Hours
CON/0805/OC5 Assemble, install and test wiring system NOS Version No.:2.0 NSQF Level: 3	**10:00 Hours**	**50:00 Hours**	**00:00Hours**	**00:00Hours**	**60:00 Hours**
Module 5: Assemble, install and test wiring system	10:00 Hours	50:00 Hours	00:00Hours	00:00Hours	60:00 Hours
CON/0805/OC6 Plan and execute electrical illumination system NOS Version No.:2.0 NSQF Level: 3	**20:00 Hours**	**40:00 Hours**	**00:00 Hours**	**00:00 Hours**	**60:00 Hours**

Module 6: Plan and execute electrical illumination system	20:00 Hours	40:00 Hours	00:00Hours	00:00Hours	60:00 Hours
CON/0805/OC7 Perform winding for armature of a ceiling fan / table fan NOS Version No.: 2.0 NSQF Level: 3	**60:00 Hours**	**60:00 Hours**	**00:00Hours**	**00:00Hours**	**120:00 Hours**
Module 7: Perform winding for armature of a ceiling fan / table fan	60:00 Hours	60:00 Hours	00:00Hours	00:00Hours	120:00 Hours
CON/0805/OC8 Work in real job situation with special emphasis on basic safety and hazards in this domain. NOS Version No.: 2.0 NSQF Level: 3	**00:00 Hours**	**00:00 Hours**	**150:00Hours**	**00:00Hours**	**150:00 Hours**
Module 8: Work in real job situation with special emphasis on basic safety and hazards in this domain.	00:00 Hours	00.00 Hours	150:00Hours	00:00Hours	150:00 Hours
DGT/VSQ/N0102 Employability Skills NOS Version No.: 1.0 NSQF Level: 3	**24:00 Hours**	**36:00 Hours**	**00:00Hours**	**00:00Hours**	**60:00 Hours**
Module 9: Employability Skills	24:00 Hours	36:00 Hours	00:00Hours	00:00Hours	60:00 Hours
Total Duration	**164:00 Hours**	**286:00 Hours**	**150:00Hours**	**00:00Hours**	**600:00 Hours**

Module Details

Module1: Apply Safe Working Practices

Mapped to CON/0805/OC1

Terminal Outcomes:

- Apply and maintain Safe Working Practices
- Recognize any unsafe situations according to site policy.
- Identify fire and safety and fire hazards
- Identify different fire extinguishers and use them as per requirements.

Duration: *10:00*	**Duration**: *20:00*
Theory–Key Learning Outcomes	**Practical–Key Learning Outcomes**
• Maintain procedures to achieve a safe working environment in line with occupational health and safety regulations and requirements according to site policy. • Recognize any unsafe situations according to site policy, and assess his report accordingly. • Identify and take necessary precautions on fire and safety hazards and report according to site policy and procedures. • Concepts of standard operation of electrical mains. • Response to emergencies seg. Power failure,fire and system failure.	• Recognize any unsafe situations according to site policy, and assess his report accordingly. • Demonstrate Personal Productive Equipment (PPE) like: safety helmet, safety glove, safety shoe, use the same as per related working environment. • Demonstrate basic first aid & CPR and use them under different circumstances. • Identify different fire extinguishers and use the same as per requirement in a mock drill. • Concept of standard operation of electrical mains and other switches. • Response to emergencies of power failure and system failure.
Classroom Aids: Computer, Projection Equipment, Power Point Presentation and software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements: First Aid box, Different types of fire extinguishers, PPE kits, Safety charts.	

Module2: Make electrical wire joints & soldering

Mapped to CON/0805/OC2

Terminal Outcomes:

- Make simple straight twist and rat-tail joints in single strand conductors / married and 'T' (Tee) joint in stranded conductors.
- Solder and de-solder the finished copper conductor joints with precaution.
- Follow the safety / precaution during joints & soldering.

Duration: *10:00*	**Duration**: *20:00*
Theory–Key Learning Outcomes	**Practical–Key Learning Outcomes**
• Identify types of wires, cables and verify their specifications. • Simple straight twist and rat-tail joints in single strand conductors / married and 'T' (Tee) joint in stranded conductors. • Procedure for soldering and de-soldering. • Follow the safety precautions during joints and soldering.	• Make simple straight twist and rat-tail joints in single strand conductors / married and 'T' (Tee) joint in stranded conductors. • Solder and de-solder the finished copper conductor joints with precaution. • Demonstration & identification of Trade hand tools. Use, care & maintenance • of various hand tools. • Practice on using cutting pliers, screwdrivers etc. skinning the cables, and • practice on joining a single strand. Practice on bare conductors joints—Viz. • Britannia, straight, Tee, Western union. • Identification of different types of cables. • Practice on using standard wire gauge. • Practice on crimping thimbles, Lugs. • Practice on checking of cables and conductors, insulation
Classroom Aids:	
Computer, Projection Equipment, Power Point Presentation and software, Facilitator's Guide, Participant's Handbook	

Tools, Equipment and Other Requirements
Steel rule, Screw Driver, Terminal screw Driver, Knife Electrician, Hammer Ball peen, Combination pliers insulated, Neon tester pencil bit type, Try square, Spanner set DE, Screw driver set (set of 5) File half round 2nd cut, File round 2nd cut, Soldering iron, Neon tester, Drill bit, wooden mallet, Pliers side cutting insulated, Pliers flat nose insulated, Pliers round nose insulated Pliers long nose insulated, Screw driver heavy duty, Screw driver heavy duty, Firmer chisel, Wire stripper,

Module 3: Analyse, demonstrate and test basic electrical connection

Mapped to CON/0805/OC3

Terminal Outcomes:

- Identify types of wires, cables and verifytheir specifications.
- Verify thecharacteristics of series, parallel and its combination circuit.
- Measure Current, Voltage and Resistance in a single phase supply / load.
- Identify the phase, neutral and earth in a single phase supply.

Duration:10:00	**Duration:20:00**
Theory–Key Learning Outcomes	**Practical–Key Learning Outcomes**
• Verify the characteristics of series, parallel and its combination circuit. • Trainee will be able to test single phase voltage using test lamp. • Trainee will be able to measure Voltage, current and resistance. • Test domestic wiring installation by using Megger. • Draw wiring of house . Practice of common domestic wiring	• Trainee will be able to test single phase voltage using test lamp. • Measure current, voltage in a single phase system. • Demonstrate the types of fuses, their ratings and applications and also to identify the parts of a MCB, ELCB and RCCB. • Earthing – check installation of earthing system and test of earthing system. • Installation of single phase Energy meters and taking reading.
Classroom Aids:	
Computer, Projection Equipment, Power Point Presentation and software, Facilitator's Guide, Participant's Handbook	
Tools, Equipment and Other Requirements	
Multi meter, Megger (Insulation tester), Voltmeter M.I. multi-range, Voltmeter M.I. multi-range, Ammeter M.I. different range, Tong Tester. Single phase K.W.H meter digital, Single phase K.W.H meter analog, Clamp on ammeter	

Module 4: Plan and prepare Earthing installation

Mapped to CON/0805/OC4

Terminal Outcomes:

- Install thepipe earthing / plate earthing and test it.
- D emonstrate how earth resistance can improve.

Duration: *20:00*	**Duration**: *40:00*
Theory–Key Learning Outcomes	**Practical–Key Learning Outcomes**
• Describe the necessity of earthing and protective devices. • Describe the details of pipe and plate earthing. • Explain the different types of fuse, MCB,RCCB,ELCB	• Install the pipe earthing and plate earthing and test it. • Demonstrate the earth resistance and measure it.
Classroom Aids:	
Computer, Projection Equipment, Power Point Presentation and software, Facilitator's Guide, Participant's Handbook	
Tools, Equipment and Other Requirements	
Steel rule, Screw Driver, Terminal screw Driver, Knife Electrician, Hammer Ball peen, Combination pliers insulated, Neon tester pencil bit type, Try square, Spanner set DE, Screw driver set (set of 5) File half round 2nd cut, File round 2nd cut, Neon tester, Drill bit, Pliers side cutting insulated, Pliers flat nose insulated, Pliers round nose insulated Pliers long nose insulated, Screw driver heavy duty, Screw driver heavy duty, Firmer chisel, Wire stripper, Multi meter, Electrical power drilling machine, Megger (Insulation tester).	

Module 5: Assemble, install and test wiring system

Mapped to CON/0805/OC5

Terminal Outcomes:

- Perform the wiring with the safety rules.
- P repare and mount the energy meterboard.
- D raw and wire up the consumers mainboard with ICDP switch and distribution fuse box in a house/building.
- Demonstrate the types of fuses, their ratings and applications and also identify theparts of a MCB, ELCB and RCCB.
- Estimate the requirement for metalconduit wiring and wire up.
- Estimate the materials and wire up thelighting circuit for a PVC conduit wiring.
- E stimate the materials and wire up.
- Alighting circuit for a corridor in metal PVC conduit.
- T est a domestic wiring installation by using Megger.

Duration: *10:00*	**Duration**: *50:00*
Theory–Key Learning Outcomes	**Practical–Key Learning Outcomes**
• Describe the safety rule while electrical wiring. • Procedure for mounting of energymeter board • Draw and wire up the consumers main board with ICDP switch and distribution fuse box in a house/building. • Estimate the requirement for metal conduit wiring and wire up. • Estimate the materials and wire up the lighting circuit for a PVC conduct wiring. • Estimate the materials and wire up a lighting circuit for a corridor in metal conduit.	• Practice on simple House wiring including installation of common electrical accessories Viz. fixing of switches, holders, plugs, etc. in T.W. boards. - Identification and use of wiring accessories; Connection of Calling Bell, Buzzer, Alarms, Light & Fan etc. • Practice, Conduit wiring. Identification of conduits and accessories & their uses, cutting, threading & laying, • Practice on Installation of conduit pipe wiring for lighting and power circuits on 230V with minimum to more number of points. Use of two way switches. • Testing of insulation by two lamp methods & megger. Making of test boards & extension boards. Fitting fixing of suitable rated fuses & MCB
Classroom Aids:	
Computer, Projection Equipment, Power Point Presentation and software, Facilitator's Guide, Participant's Handbook	
Tools, Equipment and Other Requirements	
Steel rule, Screw Driver, Terminal screw Driver, Knife Electrician, Hammer Ball peen, Combination pliers insulated, Neon tester pencil bit type, Try square, Spanner set DE, Screw driver set (set of 5) File half round 2nd cut, File round 2nd cut, Neon tester, Drill bit,	

wooden mallet, Pliers side cutting insulated, Pliers flat nose insulated, Pliers round nose insulated Pliers long nose insulated, Screw driver heavy duty, Screw driver heavy duty, Firmer chisel, Wire stripper.

Multi meter, Electrical power drilling machine, Megger (Insulation tester).

Module 6: Plan and execute electrical illumination system
Mapped to CON/0805/OC6

Terminal Outcomes:

- Assemble and connect a single twin tubeF.L.
- Connect the neon sign with the accessories and test it.

Duration: *20:00*	**Duration**: *40:00*
Theory–Key Learning Outcomes	**Practical–Key Learning Outcomes**
• Describe the procedure for connection of tube light, LED light and other light connection. • Procedure for connection of neon sign with the accessories and test it.	• Identify the accessories for connection of tube light, LED light and other electrical light. • Connect the single twin tube F.L. • Connect the neon sign and the accessories and test it.
Classroom Aids:	
Computer, Projection Equipment, Power Point Presentation and software, Facilitator's Guide, Participant's Handbook	
Tools, Equipment and Other Requirements	
Steel rule, Screw Driver, Terminal screw Driver, Knife Electrician, Hammer Ball peen, Combination pliers insulated, Neon tester pencil bit type, Try square, Spanner set DE, Screw driver set (set of 5) File half round 2nd cut, File round 2nd cut, Soldering iron, Neon tester, Drill bit, wooden mallet, Pliers side cutting insulated, Pliers flat nose insulated, Pliers round nose insulated Pliers long nose insulated, Screw driver heavy duty, Screw driver heavy duty, Firmer chisel, Wire stripper, Multi meter, Electrical power drilling machine, Megger (Insulation tester).	

Module *7:* Perform winding for armature of a ceiling fan / table fan

Mapped to CON/0805/OC7

Terminal Outcomes:

- Identify different parts off a table fan and ceiling fan.
- Draw winding diagram of a single-phase split type AC motor (concentric coil)
- Strip old winding in a fan armature by using appropriate methods.
- Use insulating paper and wooden/insulating stick as per slot of the core
- Prepare the winding coil as per size, no. ofturns and coil pitch.
- Insert the coil and mark start/end point,including connection of the coil
- Test the continuityand winding insulation.
- Assemble a motor and run the same

Duration: *60:00*	**Duration**: *60:00*
Theory–Key Learning Outcomes	**Practical–Key Learning Outcomes**
• Describe the theory of winding upto 1 hp ac motor. • Explain assembly and installation procedure up to 1HP AC motor. • External connection and insulation methods. • Details of testing and fault finding.	• Identify different parts of a table fan and ceiling fan • Insert coil in the armature and complete winding of armature of a fan motor • Test armature winding and use insulating paper and wooden/insulating stick as per slot of the core • Prepare the winding coil as per size. • Test the continuity and winding insulation • Assemble a motor and run the same
Classroom Aids:	
Computer,Projection Equipment,Power Point Presentation and software, Facilitator's Guide, Participant's Handbook	
Tools, Equipment and Other Requirements	
Steel rule, Screw Driver,Terminal screw Driver, Knife Electrician, Hammer Ball peen, Combination pliers insulated, Neon tester pencil bit type, Try square, Spanner set DE, Screw driver set (set of 5) File half round 2nd cut, File round 2nd cut, Soldering iron, Neon tester, Drill bit, wooden mallet, Pliers side cutting insulated, Pliers flat nose insulated, Pliers round nose insulated Pliers long nose insulated, Screw driver heavy duty, Screw driver heavy duty, Firmer chisel,Wire stripper, Multi meter, Megger (Insulation tester), Clamp on ammeter	

Module 8: Work in real job situation with special emphasis on basic safety and hazards in this domain

Mapped to CON/0805/OC8

Terminal Outcomes:

Assessor will check report prepared for this component of training of the course and assess whether competency has been developed to work in the real job situation with special emphasis on basic safety and hazards in this domain. (The trainee is expected to undertake work in actual workplace under any supervisor / contractor for 150 Hours.)

Duration:*00:00*	**Duration**: *150:00*
Theory–Key Learning Outcomes	**Practical–Key Learning Outcomes**
	• Assessor will check report prepared for this component of training of the course and assess whether competency has been developed to work in the real job situation with special emphasis on basic safety and hazards in this domain. (The trainee is expected to undertake work in actual workplace under any supervisor / contractor for 150 Hours.)
Classroom Aids:	
Tools, Equipment and Other Requirements	

Module9: Employability skills

Mapped to DGT/VSQ/N0102, v 1.0

Terminal Outcomes:

- Describe the traits of individual at workplace
- Demonstrate Employability and entrepreneurship skills at workplace

Duration: *24:00*	Duration: *36:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the importance of Employability Skills in meeting the job requirements. • Explain constitutional values, civic rights, duties, citizenship, responsibility towards society etc. that are required to be followed to become a responsible citizen. • Discuss 21st century skills. • Display positive attitude, self - motivation, problem solving, time management skills and continuous learning mindset in different situations. • Discuss the significance of reporting sexual harassment issues in time • Discuss the significance of using financial products and services safely and securely. • Explain the significance of approaching the concerned authorities in time for any exploitation as per legal rights and laws • Explain the importance of managing expenses, income, and savings. • Discuss the significance of using internet for browsing, accessing social media platforms, safely and securely • Discuss the need for identifying	• Show how to practice different environmentally sustainable practices • Use appropriate basic English sentences/phrases while speaking • Demonstrate how to communicate in a well -mannered way with others • Demonstrate working with others in a team • Show how to conduct oneself appropriately with all genders and PwD • Show how to operate digital devices and use the associated applications and features, safely and securely • Create a biodata • Use various sources to search and apply for jobs

opportunities for potential business, sources for arranging money and potential legal and financial challenges • Differentiate between types of customers • Explain the significance of identifying customer needs and addressing them • Discuss the significance of maintaining hygiene and dressing appropriately • Discuss the significance of dressing up neatly and maintaining hygiene for an interview • Discuss how to search and register for apprenticeship opportunities	
Classroom Aids:	
Computer, Projection Equipment, PowerPoint Presentation and software, Facilitator's Guide,Participant's Handbook	
Tools, Equipment and Other Requirements	
Computer/laptop.	

Details Syllabus Content

Details of Theory Syllabus :

Sl. No.	CONTENT	DETAILS
1	Basic safety and shock treatment	2.1 Occupational Safety & Health Basic safety introduction. 2.2 Personal protection:- Basic injury prevention, Basic first aid, Hazard identification and avoidance, safety signs for Danger, Warning, caution & personal safety message. 2.3 Use of Fire extinguishers. Visit & observation of sections. Various safety measures involved in the Industry. 2.4 Concept of Standard Operation of electrical mains. Introduction of PPEs. 2.5 Introduction to 5S concept & its application. 2.6 Response to emergencies eg: power failure, fire and system failure.
2	Fundamentals of electricity & tools, Measuring instruments.	(2.1) Basic sign and symbol (2.2) Basic electrical circuit and fundamental Laws(Ohm's Law) (2.3) Different types of common hand tools and measuring instruments Viz. Multi- meter, Volt Meter, Ammeter, Watt Meter, Energy Meter . (2.4) Basic arithmetic calculations related to trade.
3	Earthing systems and basic protective device and wiring materials	(3.1) Necessity of earthing and protective devices (3.2) Details of pipe and plate earthing. (3.3) Details of different types of fuse, MCB,RCCB,ELCB (3.4)Different types of materials used in Domestic wiring.
4	Winding and insulation of motors	(4.1) Theory of winding upto 1 hp ac motor. (4.2) Assembly and installation procedure up to 1HP AC motor. (4.3) External connection and insulation methods. (4.4) Details of testing and fault finding.

Detail of Practical Syllabus:

SL NO	CONTENT	DETAILS
1	Use of different types of fire extinguishers	(1.1) Implementation in the shop floor of the various safety measures. (1.2) Demonstration on elementary first aid. Artificial Respiration. (1.3) Practice on use of fire extinguishers. (1.4) Occupational Safety & Health Importance of housekeeping & good shop floor practices. (1.5) Health, Safety and Environment guidelines, legislations & regulations as applicable. Disposal procedure of waste materials like cotton waste, metal chips/burrs etc. (1.6) Basic safety introduction, Personal protective Equipment (PPE):- Basic injury prevention, Basic first aid, Hazard identification and

		avoidance, safety signs for Danger, Warning, caution & Occupational Safety & Health Basic safety introduction. (1.7) Personal protection:- Basic injury prevention, Basic first aid, Hazard identification and avoidance, safety signs for Danger, Warning, caution & personal safety message. (1.8) Use of Fire extinguishers. Visit & observation of sections. Various safety measures involved in the Industry. Concept of Standard Operation of electrical mains. (1.9) Introduction to 5S concept & its application. Response to emergencies eg; power failure, fire, and system failure. (1.10) Preventive measures for electrical accidents & steps to be taken in such accidents.
2	Wiring materials and fixing circuits	(2.1) Simple straight twist and rat-tail joints in single strand conductors / married and 'T' (Tee) joint in stranded conductors. (2.2) Identify types of wires, cables and verify their specifications. (2.3) Verify the characteristics of series, parallel and its combination circuit. (2.4) Identify phase/neutral/earth in a single phase circuit. (2.5) Test single phase voltage using test lamp. (2.6) Prepare and mount the energy meter. (2.7) Draw and wire up the consumers main board with ICDP switch and distribution fuse box in a house/building. (2.8) Demonstrate the types of fuses, their ratings and applications and also to identify the parts of a MCB, ELCB and RCCB. (2.9) Estimate the requirement for metal /PVC conduit wiring and wire up. (2.10) Test domestic wiring installation by using Megger. (2.11) Practice of common domestic wiring
3.	Use of common measuring instruments	(3.1) Measure Current, Voltage, wattmeter and Resistance of Single Phase load. (3.2) Check characteristics of series, parallel and its combination circuits by using ammeter and volt meter (3.3) Identify the phase, neutral and earth in single phase supply. (3.4) Connection of single phase energy meter and read it. (3.5) Use of multimeter
4.	Winding and assembly of motors	(4.1) Insert coil in the armature and complete winding of armature of a fan motor (4.2) Test armature winding and use insulating paper and wooden/insulating stick as per slot of the core (4.3) Prepare the winding coil as per size. (4.4) Test the continuity and winding insulation

		(4.5) Assemble a motor and run the same

Details of Apprenticeship syllabus:

Sl. No.	Content	Details	
1.	Basic Safety	(1.1)	Various safety measures involved at the Work place/site. Practice on basic first aid, Artificial Respiration under different circumstances. Practice on precautions regarding fire and safety hazards according to site policy and procedures. Identification and use of different fire extinguishers as per requirement. Rehearsal on site evacuation procedures according to site policy. Practice on use of Personal Productive Equipment (PPE). Understanding and observing site policies and procedures in regard to illness or accident. Practice on maintaining safe working environment in line with occupational health & safety regulations according to site policy.
2.	Hand Tools & Jointing	(2.1)	Demonstration & identification of Trade hand tools. Use, care & maintenance of various hand tools.
		(2.2)	Practice on using cutting pliers, screwdrivers etc. skinning the cables, and practice on joining a single strand. Practice on bare conductors joints—Viz. Britannia, straight, Tee, Western union.
		(2.3)	Identification of different types of cables. Practice on using standard wire gauge. Practice on crimping thimbles, Lugs. Practice on checking of cables and conductors, insulations
3.	House Wiring Practice	(3.1)	Practice on simple House wiring including installation of common electrical accessories Viz. fixing of switches, holders, plugs, etc. in T.W. boards. - Identification and use of wiring accessories; Connection of Calling Bell, Buzzer, Alarms, Light & Fan etc.
		(3.2)	Practice in casing, Capping, Conduit wiring. Identification of conduits and accessories & their uses, cutting , threading & laying, Practice on Installation of conduit pipe wiring for lighting and power circuits on 230V with minimum to more number of points. Use of two way switches. Testing of insulation by two lamp methods & megger. Making of test boards & extension boards. Fitting fixing of suitable rated fuses, contactors & MCBs.
4.	Earthing Practice	(4.1)	Earthing – Practice on installation of earthing system and testing of earthing system.
5.	Practice on Energy Meter	(5.1)	Installation of single phase Energy meters and taking reading.
6.	Maintenance of Electrical Appliances	(6.1)	Practice overhauling of common electrical accessories Viz. Light, Fan, Single phase motors, Rewinding /assembly of differ rent electrical appliances.
7.	Maintenance & winding of Single Phase Motors of	(7.1)	Connection of single phase motor, identification, testing, running, and

	ceiling fan /Table fan		reversing.
		(7.2)	Practice on Making forma, estimating requirement of coils, coil insulation, Slot insulation, Insertion of coils in slots, coil connection, Practice on single layer concentric Winding, Baking, impregnating and varnishing.

Detail of Employability Skills Syllabus:

Employability Skills (60 hours)

Model Curriculum

Module Summary:

S. No	Module Name	Duration (hours)	Assessment Marks
1.	Introduction to Employability Skills	1.5	2
2.	Constitutional values - Citizenship	1.5	2
3.	Becoming a Professional in the 21st Century	2.5	6
4.	Basic English Skills	10	6
5.	Career Development & Goal Setting	2	3
6.	Communication Skills	5	4
7.	Diversity & Inclusion	2.5	2
8.	Financial and Legal Literacy	5	5
9.	Essential Digital Skills	10	8
10.	Entrepreneurship	7	4
11.	Customer Service	5	3
12.	Getting Ready for Apprenticeship & Jobs	8	5
	Total	**60**	**50**

Key Learning Outcomes

Introduction to Employability Skills **Duration: 1.5 Hours**

After completing this programme, participants will be able to:

1. Discuss the Employability Skills required for jobs in various industries
2. List different learning and employability related GOI and private portals and their usage

Constitutional values - Citizenship **Duration: 1.5 Hours**

3. Explain the constitutional values, including civic rights and duties, citizenship, responsibility towards society and personal values and ethics such as honesty, integrity, caring and respecting others that are required to become a responsible citizen
4. Show how to practice different environmentally sustainable practices.

Becoming a Professional in the 21st Century **Duration: 2.5 Hours**

5. Discuss importance of relevant 21st century skills.
6. Exhibit 21st century skills like Self-Awareness, Behavior Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn etc. in personal or professional life.
7. Describe the benefits of continuous learning.

Basic English Skills **Duration: 10 Hours**

8. Show how to use basic English sentences for everyday conversation in different contexts, in person and over the telephone
9. Read and interpret text written in basic English
10. Write a short note/paragraph / letter/e -mail using basic English

Career Development & Goal Setting Duration: 2 Hours

11. Create a career development plan with well-defined short- and long-term goals

Communication Skills Duration: 5 Hours

12. Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette.
13. Explain the importance of active listening for effective communication
14. Discuss the significance of working collaboratively with others in a team

Diversity & Inclusion Duration: 2.5 Hours

15. Demonstrate how to behave, communicate, and conduct oneself appropriately with all genders and PwD
16. Discuss the significance of escalating sexual harassment issues as per POSH act.

Financial and Legal Literacy Duration:5 Hours

17. Outline the importance of selecting the right financial institution, product, and service
18. Demonstrate how to carry out offline and online financial transactions, safely and securely
19. List the common components of salary and compute income, expenditure, taxes, investments etc.
20. Discuss the legal rights, laws, and aids

Essential Digital Skills Duration: 10 Hours

21. Describe the role of digital technology in today's life
22. Demonstrate how to operate digital devices and use the associated applications and features, safely and securely
23. Discuss the significance of displaying responsible online behavior while browsing, using various social media platforms, e-mails, etc., safely and securely
24. Create sample word documents, excel sheets and presentations using basic features
25. utilize virtual collaboration tools to work effectively

Entrepreneurship Duration: 7 Hours

26. Explain the types of entrepreneurship and enterprises
27. Discuss how to identify opportunities for potential business, sources of funding and associated financial and legal risks with its mitigation plan
28. Describe the 4Ps of Marketing-Product, Price, Place and Promotion and apply them as per requirement
29. Create a sample business plan, for the selected business opportunity

Customer Service Duration: 5 Hours

30. Describe the significance of analyzing different types and needs of customers
31. Explain the significance of identifying customer needs and responding to them in a professional manner.
32. Discuss the significance of maintaining hygiene and dressing appropriately

Getting Ready for apprenticeship & Jobs Duration: 8 Hours

33. Create a professional Curriculum Vitae (CV)
34. Use various offline and online job search sources such as employment exchanges, recruitment agencies, and job portals respectively
35. Discuss the significance of maintaining hygiene and confidence during an interview
36. Perform a mock interview
37. List the steps for searching and registering for apprenticeship opportunities

Assessment Strategy

The trainee will be tested for the acquired skill, knowledge and attitude through formative/summative assessment at the end of the course and as this NOS and MC is adopted across sectors and qualifications, the respective AB can conduct the assessments as per their requirements.

LIST OF TOOLS & EQUIPMENT FOR EMPLOYABILITY SKILLS		
S No.	**Name of the Equipment**	**Quantity**
1.	Computer (PC) with latest configurations – and Internet connection with standard operating system and standard word processor and worksheet software (Licensed) (all software should either be latest version or one/two version below)	As required
2.	UPS	As required
3.	Scanner cum Printer	As required
4.	Computer Tables	As required
5.	Computer Chairs	As required
6.	LCD Projector	As required
7.	White Board 1200mm x 900mm	As required
Note: Above Tools &Equipment not required, if Computer LAB is available in the institute.		

Projected Tools and Equipment

Assistant House wireman and Motor Winder

Sl.no	Tools/Equipments	Specification	Total Unit for a batch of 30 students
1	Steel rule	300mm	30
2	Screw Driver	200mm	30
3	Screw Driver	100mm	30
4	Terminal screw Driver	75 mm (Connector)	30
5	Knife Electrician	D.B.	30
6	Hammer Ball peen.	0.25 Kg	30
7	Plumb bob	115grams	30
8	Combination pliers insulated	200 mm	30
9	Neon tester pencil bit type	500 volt	30
10	Try square	200 mm	30
12	Spanner set DE	Set of 6 from 6x7 to 16x7	30
13	Screw driver set (set of 5)	100-300 mm	30
14	File half round 2nd cut	250 mm	30
15	File round 2nd cut	150 mm	30

Sl.no	Tools/Equipments	Specification	Total Unit for a batch of 30 students
16	Soldering iron	60 w/230 v	30
17	Neon tester	230 v	30
18	Drill bit	6mm, 8mm & 10 mm	6
19	Rubber matting	2 meter x 1 meter x 9mm	2
20	Wiring board on stand	3 meter x1 meter with 0.5 meter projection on the top	15
21	Fire extinguishers	Dry chemical 5 Kg	2
22	Set of Rowel punch	8,10mm	16
23	Center punch	100mm	2
24	Combination pliers insulated	200 mm insulated	30
26	Bradawl	150 mm X 6mm square pointed	30
28	wooden mallet	1kg.(75mm x15mm)	6
29	Pliers side cutting insulated	200mm	5
30	Pliers flat nose insulated	150mm	5
31	Pliers round nose insulated	200mm	5
32	Pliers long nose insulated	200mm	5
33	Screw driver heavy duty	200mm	2
34	Screw driver heavy duty	300 mm	5
35	Firmer chisel	1"	10
36	Firmer chisel	J4 "	5
37	Hammer Ball Peen	0.50 kg.	5
38	Wire stripper	150mm	5
39	Hammer Ball Peen	1.00 kg	5
40	Hammer cross Peen	0.50 kg.	5
41	Rawal tool holder & Bit	No.8, 10, 14, & 16	2
42	Adjustable spanner	300mm	1
43	Bench vice	150mm	5
44	Rubber gloves	5000volts	2
46	Multi meter	0-5, 100, 200, 500 milli amperes 0-100-1000, 10000 amperes; ohms.kilo ohms,mega ohms.; 0-150, 300, 600 V AC/DC	4
47	Electrical power drilling machine	12mm, capacity 250 volts universal type	1
48	Megger (Insulation tester)	500 volts	2
49	Voltmeter M.I. multi-range	0-150, 300, 600 V	2
50	Voltmeter M.I. multi-range	0-50, 75, 150 V	1

Sl.no	Tools/Equipments	Specification	Total Unit for a batch of 30 students
51	Ammeter M.I.	0-5Amp. Panel board type	2
52	Ammeter M.I	0 - 10 Amp. panel board mounting type	1
56	Ammeter M.I	0 - 10 Amp. panel board mounting type	1
57	Single phase K.W.H meter digital	5A, 250 V A.C.	2
58	Single phase K.W.H meter analog	5A, 250 V A.C.	2
59	Clamp on ammeter	0-25A,0-200A	1
60	Watt meter Dynamo meter type	5 Amps.300 volt, 2.50 kw	1
61	Capacitor start motor	1/2 H.P. single phase 250 V	1
62	Split phase motor	1/2 H.P. single phase 250 V	1
63	Tachometer digital type	Non contact type 0-6000 RPM	1
64	Miniature circuit breaker(MCB)	240V/ 6 Amps	2
65	Earth leakage circuit breaker (ELCB)	240V/25mA	2
66	Metal clad circuit breaker (MCCB)	240V/1A	2
67	Table Fan	60 W/230V	4
68	Celling Fan	80W/230V	4

Trainer Requirements

Annexure

Trainer Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
CTS/ATS	Electrician/Wireman trade	5	-	-	-	-
Diploma	Electrical Engineering	3	-	-	-	-
M.E/ M.Tech	Electrical Engineering	1	-	-	-	-
B. Tech/BE	Electrical Engineering	2	-	-	-	-
ITI	Electrician Trade	3	-	-	-	-

Trainer Certification	
Domain Certification	**Platform Certification**
Certified for Job Role: "Assistant House Wireman and Motor Winder" mapped to QP: " STC -CON/NSQF -2017 /802". OR STC-CON/NSQF - 2022/0805 Minimum accepted score is 80%.	Recommended that the Trainer is certified for the Job Role: "Trainer", mapped to the Qualification Pack:"MEP/Q2601".Minimum accepted score as per MEPSC guidelines is 80%.

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training/Assessment Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
CTS/ATS	Electrician/Wireman trade	5	-	-	-	-
Diploma	Electrical Engineering	3	-	-	-	-
M.E/ M.Tech	Electrical Engineering	1	-	-	-	-
B. Tech/BE	Electrical Engineering	2	-	-	-	-
ITI	Electrician Trade	5	-	-	-	-

Assessor Certification	
Domain Certification	**Platform Certification**
Certified for Job Role: "Assistant House Wireman and Motor Winder" mapped to QP: " STC - CON/NSQF -2017 /802". OR STC-CON/NSQF - 2022/0805 Minimum accepted score is 80%.	Recommended that the Assessor is certified for the Job Role: "Assessor", mapped to the Qualification Pack: "MEP/Q2701". Minimum accepted score as per MEPSC guide lines is 80%.

Assessment Strategy

Assessment will be based on the concept of Independent Assessors empaneled with West Bengal State Council of Technical & Vocational Education & Skill Development (WBSCT&VE&SD), identified, selected, trained and certified on Assessment techniques. These Assessors would be aligned to assess as per the laid down criteria.

WBSCT&VE&SD would conduct assessment only at the training centers or designated testing centers authorized by WBSCT&VE&SD.

Ideally, the assessment will be a continuous process comprising of two distinct steps:

A. Continuous assessment by Trainers
B. Term end /Final Assessment by WBSCT&VE&SD

Each National Occupational Standard (NOS) in the respective QPs will be assigned weightage. Each Performance Criteria in the NOS will be assigned marks for theory and/or practical based on relative importance and criticality of function.

This will facilitate preparation of question bank / paper sets for each of the QPs. Each of these papers sets/question banks created by subject matter experts through WBSCT&VE&SD, especially with regard to the practical test and the defined tolerances, finish, accuracy etc.

The following tools are proposed to be used for final assessment:

i. Written Test: This will comprise of (i) True/False Statements and/or (ii)Multiple Choice Questions and/or (iii) Matching Type Questions. Online system for this will be preferred.
ii. Practical Test: This will comprise a test job to be prepared as per project briefing following appropriate working steps, using necessary tools, equipment and instruments. Through observation it will be possible to ascertain candidate's aptitude, attention to details, quality consciousness etc.
iii. Structured Viva-voce: This tool will be used to assess the conceptual understanding and the behavioral aspects as regards the job role and the specific task at hand.

Marks distribution as per outcome

Course Name	Sr No	Outcome No.	Outcome Name	Th Hrs	Pr Hrs	Total marks Th	Total marks Pr
Assistant House Wireman and Motor Winder	1	CON/0805/ OC1	Apply Safe Working Practices	10	20	12	40
	2	CON/ 0805/ OC2	Make electrical wire joints & soldering	10	20	12	40
	3	CON/ 0805/ OC3	Analyse, demonstrate and test basic electrical connection	10	20	12	40
	4	CON/ 0805/ OC4	Plan and prepare Earthing installation	20	40	30	70
	5	CON/ 00805/ OC5	Assemble, install and test wiring system	10	50	13	95
	6	CON/ 0805/ OC6	Plan and execute electrical illumination system	20	40	26	80
	7	CON/ 0805/ OC7	Perform winding for armature of a ceiling fan / table fan	60	60	80	114
	8	CON/ 0805/ OC8	Work in real job situation with special emphasis on basic safety and hazards in this domain.	0	150	0	286
	9	DGT/VSQ/N0102	Employability Skills- 60 hrs.	24	36	15	35
	TOTAL Theory 159 Hrs, Practical 291 Hrs (Including Employability Skill 60 Hrs), OJT = 150 Hrs					200	800

Glossary

Term	Description
Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to Be known and/or understood in order to accomplish or to solve a problem.
Key Learning Outcome	Key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training Outcome is specified in terms of knowledge, understanding(theory)and skills (practical application).
OJT(M)	On-the-job training(Mandatory);trainees are mandated to complete specified hours of training on site
OJT(R)	On-the-job training(Recommended);trainees are recommended the specified hours of training on site
Procedural Knowledge	Procedural knowledge addresses how to do something, or how to perform a task. It is the ability to work, or produce a tangible work output by applying cognitive, affective or psycho motor skills.
Training Outcome	Training outcome is a statement of what a learner will know, understand and be able to do **upon the completion of the training**.
Terminal Outcome	Terminal outcome is a statement of what a learner will know, understand and be able to do **upon the completion of a module.** A set of terminal outcomes help to achieve the training outcome.

Acronyms and Abbreviations

Term	Description
QP	Qualification Pack
NSQF	National Skills Qualification Framework
NSQC	National Skills Qualification Committee
NOS	National Occupational Standards