GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT & ENTREPRENEURSHIP
DIRECTORATE GENERAL OF TRAINING

COMPETENCY BASED CURRICULUM

IN PLANT LOGISTICS ASSISTANT

(Duration: One Year)

CRAFTSMEN TRAINING SCHEME (CTS)

NSQF LEVEL- 3.5

SECTOR – LOGISTICS

Directorate General of Training

IN PLANT LOGISTICS ASSISTANT

(Engineering Trade)

(Revised in March 2023)

Version: 2.0

CRAFTSMEN TRAINING SCHEME (CTS)

NSQF LEVEL- 3.5

Developed By

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Directorate General of Training
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1. COURSE INFORMATION

During the one-year duration of In Plant Logistics Assistant trade a candidate is trained on professional skills& knowledge, Engineering Drawing, Workshop Calculation & Science and Employability skill related to job role. In addition to this a candidate is entrusted to undertake project work and extracurricular activities to build up confidence. The Broad components covered during the course are given below:

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During the Course the trainee learns about Safety and Precaution which includes different type of dangerous goods and associated risks and ways of handling, Safety rules and Procedures, SOP and the handling procedure in case of miss-happenings, safety policy inside the company premises, Importance of Proper usage of PPE and consequences of wrong usage, Details OSHA and its application, 5S and its implementation and practice and how to maintain Health, Safety and Security measures during operations etc.

The trainee will learn Physical requirements for performing functions (Body Positions).He will learn basics of supply chain logistics and Understand key concepts of Logistics in a manufacturing setup and supply chain logistics .The trainee will practice the key activities of inbound, In plant and outbound activities like Loading, Unloading, Receiving, sorting, Storing, Picking and dispatch activities, basic of inventory & stores management.

He will also practice different types of inventory management, the use of Technology and equipment like computer-based scanners, RFID scanners, other associated software used in in-plant logistics, Inbound process like Identify and classify raw materials / goods into different types, Out-bound process like read and verify dispatch orders and collect acknowledgment and delivery reports and Prepare reports related to inventory change, dispatches, delivery success, inbound receipts.

2. TRAINING SYSTEM

2.1 GENERAL

The Directorate General of Training (DGT) under Ministry of Skill Development & Entrepreneurship offers a range of vocational training courses catering to the need of different sectors of economy/ Labour market. The vocational training programmes are delivered under the aegis of Directorate General of Training (DGT). Craftsman Training Scheme (CTS) with variants and Apprenticeship Training Scheme (ATS) are two pioneer schemes of DGT for strengthening vocational training.

In Plant Logistics Assistanttrade under CTS will be delivered nationwide through network of ITIs. The course is of one year duration. It mainly consists of Domain area and Core area. The Domain area (Trade Theory & Practical) impart professional skills and knowledge, while Core area (Employability Skills) impart requisite core skill, knowledge and life skills. After passing out of the training program, the trainee is awarded National Trade Certificate (NTC) by DGT which is recognized worldwide.

Trainees broadly need to demonstrate that they are able to:

- Read and interpret technical parameters/ documents, plan and organize work processes, identify necessary materials and tools;
- Perform task with due consideration to safety rules, accident prevention regulations and environmental protection stipulations;
- Apply professional skill, knowledge & employability skills while performing jobs.
- Check the job/ assembly as per drawing for functioning identify and rectify errors in job/ assembly.
- Document the technical parameters related to the task undertaken.

2.2 PROGRESSION PATHWAYS

- Can join industry as Logistic Executive and will progress further as Senior Logistic Executive, Supervisor and can rise up to the level of Manager.
- Can become Entrepreneur in the related field.
- Can join Apprenticeship programme in different types of industries leading to National Apprenticeship certificate (NAC).
- Can join Crafts Instructor Training Scheme (CITS) in the trade for becoming instructor in ITIs.
- Can join Advanced Diploma (Vocational) courses under DGT as applicable.

2.3 COURSE STRUCTURE

Table below depicts the distribution of training hours across various course elements during a period of one year: -

S No.	Course Element	Notional Training Hours
1	Professional Skill (Trade Practical)	840
2	Professional Knowledge (Trade Theory)	240
3	Employability Skills	120
	Total	**1200**

Every year 150 hours of mandatory OJT (On the Job Training) at nearby industry, wherever not available then group project is mandatory.

On the Job Training (OJT)/ Group Project	150
Optional Courses (10th/ 12th class certificate along with ITI certification or add on short term courses)	240

Trainees of one-year or two-year trade can also opt for optional courses of up to 240 hours in each year for 10th/ 12th class certificate along with ITI certification, or, add on short term courses.

2.4 ASSESSMENT & CERTIFICATION

The trainee will be tested for his skill, knowledge and attitude during the period of course through formative assessment and at the end of the training programme through summative assessment as notified by the DGT from time to time.

a) The Continuous Assessment (Internal)during the period of training will be done by **Formative Assessment Method** by testing for assessment criteria listed against learning outcomes. The training institute has to maintain individual *trainee portfolio* as detailed in assessment guideline. The marks of internal assessment will be as per the formative assessment template provided on www.bharatskills.gov.in.

b) The final assessment will be in the form of summative assessment. The All India Trade Test for awarding NTC will be conducted by Controller of examinations, DGT as per the guidelines. The pattern and marking structure is being notified by DGT from time to time. **The learning outcome and assessment criteria will be basis for setting question papers for final**

assessment. The examiner during final examination will also check individual trainee's profile as detailed in assessment guideline before giving marks for practical examination.

2.4.1 PASS REGULATION

For the purposes of determining the overall result, weightage of 100% is applied for six months and one year duration courses and 50% weightage is applied to each examination for two years courses. The minimum pass percent for Trade Practical and Formative assessment is 60% & for all other subjects is 33%.

2.4.2 ASSESSMENT GUIDELINE

Appropriate arrangements should be made to ensure that there will be no artificial barriers to assessment. The nature of special needs should be taken into account while undertaking assessment. Due consideration should be given while assessing for teamwork, avoidance/reduction of scrap/wastage and disposal of scarp/wastage as per procedure, behavioral attitude, sensitivity to environment and regularity in training. The sensitivity towards OSHE and self-learning attitude are to be considered while assessing competency.

Assessment will be evidence based comprising some of the following:

- Job carried out in labs/workshop
- Record book/ daily diary
- Answer sheet of assessment
- Viva-voce
- Progress chart
- Attendance and punctuality
- Assignment
- Project work
- Computer based multiple choice question examination
- Practical Examination

Evidences and records of internal (Formative) assessments are to be preserved until forthcoming examination for audit and verification by examination body. The following marking pattern to be adopted for formative assessment:

Performance Level	Evidence

(a) Marks in the range of 60 -75% to be allotted during assessment	
For performance in this grade, the candidate with occasional guidance and showing due regard for safety procedures and practices, has produced work which demonstrates attainment of an acceptable standard of craftsmanship.	• Demonstration of good skill in the use of hand tools, machine tools and workshop equipment • 60-70% accuracy achieved while undertaking different work with those demanded by the component/job/set standards. • A fairly good level of neatness and consistency in the finish • Occasional support in completing the project/job.
(b)Marks in the range of above75% - 90% to be allotted during assessment	
For this grade, the candidate, with little guidance and showing due regard for safety procedures and practices, has produced work which demonstrates attainment of a reasonable standard of craftsmanship.	• Good skill levels in the use of hand tools, machine tools and workshop equipment • 70-80% accuracy achieved while undertaking different work with those demanded by the component/job/set standards. • A good level of neatness and consistency in the finish • Little support in completing the project/job
(c) Marks in the range of above 90% to be allotted during assessment	
For performance in this grade, the candidate, with minimal or no support in organization and execution and with due regard for safety procedures and practices, has produced work which demonstrates attainment of a high standard of craftsmanship.	• High skill levels in the use of hand tools, machine tools and workshop equipment • Above 80% accuracy achieved while undertaking different work with those demanded by the component/job/set standards. • A high level of neatness and consistency in the finish. • Minimal or no support in completing the project.

3. JOB ROLE

An In-plant logistics Assistant is responsible for coordinating for receipt of goods and their storage within the stock yard, movement of goods within the industry premise from procurement to stock and stock to production line and for movement of finished goods within plant. He is also responsible for ensuring timely delivery of materials at the production line, maintaining records of inventory, receipt and despatches from the stock yard, providing daily and weekly reports on the inventory to the superiors, developing daily and weekly schedule for inbound and outbound activities, ensuring the safety and security of materials within the stockyard, initiate and apply new methods to reduce logistics costs and improve the process flow.It covers movements within the manufacturing plant of raw materials, components and sub-assemblies. These include storage of raw material and movement of raw material from stocking point to production line and movement of finished goods to stocking point, its storage and bringing finished products out to the factory gate.

Reference NCO-2015:

a) 4321.0100 - Store Keeper
b) 4321.0601 - Warehouse Picker
c) 4321.0602 - Warehouse Binner

Reference NOS: --

i. LSC/N9909
ii. LSC/N1750
iii. LSC/N1751
iv. LSC/N0108
v. LSC/N0401
vi. LSC/N0402
vii. LSC/N0403
viii. LSC/N0404
ix. LSC/N0405
x. LSC/N0406
xi. LSC/N0102
xii. LSC/N0107
xiii. LSC/N0302
xiv. LSC/N1105
xv. LSC/N2202
xvi. LSC/N1114
xvii. LSC/N2117
xviii. LSC/N2320
xix. CSC/N9401
xx. CSC/N9402

4. GENERAL INFORMATION

Name of the Trade	**In Plant Logistics Assistant**
NCO - 2015	4321.0100, 4321.0601, 4321.0602
NOS Covered	LSC/N9909, LSC/N1750, LSC/N1751, LSC/N0108, LSC/N0401, LSC/N0402, LSC/N0403, LSC/N0404, LSC/N0405, LSC/N0406, LSC/N0102, LSC/N0107, LSC/N0302, LSC/N1105, LSC/N2202, LSC/N1114, LSC/N2117, LSC/N2320, CSC/N9401, CSC/N9402
NSQF Level	Level-3.5
Duration of Craftsmen Training (Instructional Hours)	One Year (1200 hours + 150 hours OJT/Group Project)
Entry Qualification	Passed 10th class examination with Science and Mathematics or with vocational subject in same sector or its equivalent.
Minimum Age	14 years as on first day of academic session.
Eligibility for PwD	LD, LC, DW, AA, DEAF, HH
Unit Strength (No. Of Student)	20 (There is no separate provision of supernumerary seats)
Space Norms	25 Sq. m
Power Norms	4 KW
Instructors Qualification for	
(i) In Plant Logistics Assistant Trade	B.Voc/Degree in Mechanical/ Production Engineering from AICTE/UGC recognized Engineering College/ university with one-year two years experience in the relevant field. **OR** 03 years Diploma in Mechanical/ Production Engineering from AICTE/recognized board of technical education or relevant Advanced Diploma (Vocational) from DGT with two years' experience in the relevant field. **OR** NTC/NAC passed in the trade of " In Plant Logistics Assistant" with three years' experience in the relevant field. **Essential Qualification:** Relevant Regular / RPL variants of National Craft Instructor

	Certificate (NCIC) under DGT. ***NOTE: Out of two Instructors required for the unit of 2(1+1), one must have Degree/Diploma and other must have NTC/NAC qualifications. However, both of them must possess NCIC in any of its variants.***
(ii) Workshop Calculation & Science	B.Voc/Degree in Engineering from AICTE/UGC recognized Engineering College/ university with one-year experience in the relevant field. **OR** 03 years Diploma in Engineering from AICTE / recognized board of technical education or relevant Advanced Diploma (Vocational) from DGT with two years' experience in the relevant field. **OR** NTC/ NAC in any one of the engineering trades with three years' experience. **Essential Qualification:** Regular / RPL variants of National Craft Instructor Certificate (NCIC) in relevant trade **OR** Regular / RPL variants NCIC in RoDA or any of its variants under DGT
(iii) Engineering Drawing	B.Voc/Degree in Engineering from AICTE/UGC recognized Engineering College/ university with one-year experience in the relevant field. **OR** 03 years Diploma in Engineering from AICTE / recognized board of technical education or relevant Advanced Diploma (Vocational) from DGT with two years' experience in the relevant field. **OR** NTC/ NAC in any one of the engineering/ Draughtsman group of trades with three years' experience. **Essential Qualification:** Regular / RPL variants of National Craft Instructor Certificate (NCIC) in relevant trade OR Regular/RPL variants NCIC in RoDA or any of its variants under DGT

(iv) Employability Skill	MBA/ BBA / Any Graduate/ Diploma in any discipline with Two years' experience with short term ToT Course in Employability Skills. (Must have studied English/ Communication Skills and Basic Computer at 12th / Diploma level and above) **OR** Existing Social Studies Instructors in ITIs with short term ToT Course in Employability Skills.
(v) Minimum age for Instructor	21 years
List of Tools & Equipment	As per Annexure-I

5. LEARNING OUTCOME

Learning outcomes are a reflection of total competencies of a trainee and assessment will be carried out as per the assessment criteria.

5.1 LEARNING OUTCOMES

1. Recognize & comply safe working practices, environment regulation and housekeeping. (NOS: LSC/N9909)
2. Follow right body position for different activities. (NOS: LSC/N9909)
3. Explain the key concepts of Logistics in a manufacturing setup and supply chain logistics and key activities of in plant logistics. (NOS: LSC/N1750)
4. Perform different type of In-plant logistic activities. (NOS: LSC/N1751)
5. Apply knowledge of different inventory models, storage handling equipment and computer-based inventory, counting tools to meet the job requirement and increase productivity. (NOS: LSC/N0108)
6. Validate the technical specification of various handling equipment which helps during movement processes. (NOS: LSC/N0401, LSC/N0402, LSC/N0403, LSC/N0404, LSC/N0405, LSC/N0406)
7. Carryout activities based on daily receipt and dispatch instructions received. (NOS: LSC/N0102, LSC/N0107, LSC/N0302)
8. Develop schedules and prioritize activities so as to plan every day without any delays. (NOS: LSC/N1105, LSC/N2202, LSC/N0107, LSC/N0302. LSC/N1114)
9. Explain Reporting Activities, MIS System and its use. (NOS: LSC/N2117, LSC/N2320)
10. Read and apply engineering drawing for different application in the field of work. (NOS: CSC/N9401)
11. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study. (NOS: CSC/N9402)

6. ASSESSMENT CRITERIA

LEARNING OUTCOMES	ASSESSMENT CRITERIA
1. Recognize & comply safe working practices, environment regulation and housekeeping. (NOS: LSC/N9909)	Identify, handle and store/ dispose of dangerous/unsalvageable goods and substances according to site policy and procedures following Occupational Health & safety regulations/requirements.
	Follow and maintain procedures to achieve a safe working environment in line with occupational health and safety regulations and requirements.
	Appraise company safety policy inside the company premises.
	Identify Personal Productive Equipment (PPE) and use the same as per related working environment.
2. Follow right body position for different activities. (NOS: LSC/N9909)	Demonstrate right body position for different activities
3. Explain the key concepts of Logistics in a manufacturing setup and supply chain logistics and key activities of in plant logistics. (NOS: LSC/N1750)	Explain the key concepts of Logistics in a manufacturing setup and supply chain logistics.
	Explain key activities of inbound, In plant and outbound logistics.
4. Perform different type of In-plant logistic activities. (NOS: LSC/N1751)	Discuss basic activities in in-plant logistics.
	Explain loading, unloading, receiving, sorting, storing, picking and dispatch activities.
	Carryout different activities in in-plant logistics.
	Explain the process of coordinating with assembly line regarding their requirement and addressing the same in the timely manner.
5. Apply knowledge of different inventory models, storage handling equipment	Elaborate receiving and storage process.
	Determine location by basis of allocation of Goods storage.
	Explain different types of inventory management- FIFO, LIFO, etc. Perform allocation of goods storage location through team activities.

and computer based inventory, counting tools to meet the job requirement and increase productivity. (NOS: LSC/N0108)	Elaborate basic advantages, benefits, challenges associated with inventory models and suitability to different manufacturing set ups. Follow do's and don'ts during inventory counting and good practices associated with inventory management and handling.
6. Validate the technical specification of various handling equipment which helps during movement processes. (NOS: LSC/N0401 TO NO406)	Use computer based scanners, RFID scanners and other associated software.
	Use communication devices to track and count inventory.
	Select MHEs like forklift etc. based on their capacity, their usage, their technical limitations and suitability if use for different activities.
7. Carryout activities based on daily receipt and dispatch instructions received. (NOS: LSC/N0102, LSC/N0107, LSC/N0302)	Identify and classify raw materials/goods into different types.
	Select right equipment for different scenarios and products.
	Read and fill different types of forms and reports.
	Assess the requirement of the manufacturing line and maintain the required inventory of different items.
	Perform verification of goods at the time of receipt of goods.
	Read and verify dispatch orders and collect acknowledgement and delivery reports.
	Follow the process to identify the item and the required carrier.
	Coordinate with vendors for timely supply of appropriate quantities of items based on usage norms and requirement of manufacturing setup.
	Carryout dispatch activities and generate dispatch record, verify number and type of product, collect acknowledgement of dispatch
8. Develop schedules and prioritize activities so as to plan every day without any delays. (NOS: LSC/N1105, LSC/N2202, LSC/N0107, LSC/N0302. LSC/N1114)	Explain the various verifications to be undertaken at the time of receipt of goods.
	Explain activities to be conducted in dispatch- generate dispatch record, verify number and types of product, collect acknowledgement of dispatch.
	Plan and schedule deliveries as per requirement.
	Schedule delivery so that no delay and the carrier resource is utilized in the most efficient manner.
	Follow with manufacturing and delivery team to ensure delivery and

	collect delivery reports.
	Use basic formats and reports associated with receipt of goods.
	Follow various best practices associated with handling in-plant logistics.
9. Explain Reporting Activities, MIS System and its use. (NOS: LSC/N2117, LSC/N2320)	Prepare different types of reports related to inventory change, dispatches, delivery success, inbound receipts, etc.
	Handle different types of MIS systems that are commonly used for reporting.
	Update the reports in MIS. Use.
	Microsoft excel and office. Explaining various good practices associated with reporting activities and their benefits.
10. Read and apply engineering drawing for different application in the field of work. (NOS: CSC/N9401)	Read & interpret the information on drawings and apply in executing practical work.
	Read &analyze the specification to ascertain the material requirement, tools and assembly/maintenance parameters.
	Encounter drawings with missing/unspecified key information and make own calculations to fill in missing dimension/parameters to carry out the work.
11. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study. (NOS: CSC/N9402)	Solve different mathematical problems
	Explain concept of basic science related to the field of study

7. TRADE SYLLABUS

SYLLABUS FOR IN PLANT LOGISTICS ASSISTANT TRADE			
DURATION: ONE YEAR			
Duration	**Reference Learning Outcome**	**Professional Skills (Trade Practical)**	**Professional Knowledge (Trade Theory)**
Professional Skill 70 Hrs.; Professional Knowledge 14 Hrs.	Recognize & comply safe working practices, environment regulation and housekeeping.	1. Handle and understand associated risks involved with various types of dangerous goods and handle them safely. Follow the safe ways of handling. 2. Follow the Safety rules and Procedure at all time. 3. In case of miss-happenings, apply SOP and follow the handling procedures. 4. Follow always the company safety policy inside the company premises. 5. Understand the consequences of wrong usage of PPE. Select the right PPE and use PPE properly. Follow OSHA. 6. Implement 5S according to the company safety policy. Maintain Health, Safety and Security measures while carrying out operations.	**Safe working Practice** Types of dangerous goods and their associated risks. Ways of safe handling. Safety rules and Procedures. SOP and the handling procedure in case of miss-happenings Company safety policy to be followed inside the company premises if any. PPE and their usage and consequences of wrong usage. Selection of PPE. Details OSHA and its application 5S and its implementation and practice in the company. Health, Safety and Security measures to be adopted during operations and its maintenance.
Professional Skill 50 Hrs.; Professional Knowledge 08 Hrs.	Follow right body position for different activities	**Body postures - benefits and hazards** 7. Demonstrate right body position for different activities. 8. Use different body postures for different	**Body postures - benefits and hazards** Physical requirements for performing different functions (Body Positions) Different body postures for

		activities keeping in view their benefits and hazards.	different activities their benefits and hazards.
Professional Skill 70 Hrs.; Professional Knowledge 14 Hrs.	Explain the key concepts of Logistics in a manufacturing setup and supply chain logistics and key activities of in plant logistics.	**Concepts of Logistics in a manufacturing setup** 9. Understand key concepts of Logistics in a manufacturing setup and supply chain logistics. 10. Perform key activities of inbound, In plant and outbound logistics. 11. Watch Video of logistics activities in an industrial setup providing practical information of different logistic activities and follow.	**Concepts of Logistics in a manufacturing setup** Introduction to Logistics in a manufacturing setup Key activities being conducted – Inbound, in-plant and outbound activities Types of roles and associated responsibility of in plant logistics technician.
Professional Skill 100 Hrs.; Professional Knowledge 18 Hrs.	Perform different type of In-plant logistic activities.	**In-plant logistics activities** 12. Carry out activities of in-plant logistics (Loading, Unloading, Receiving, sorting, Storing, Picking and dispatch activities etc.,) 13. Coordinate with assembly line for their requirement and meet their requirement in time. 14. Watch video showing the activities coupled with learning group activities connected with in plant logistics.	**In-plant logistics activities** Basic activities of in-plant logistics Loading, Unloading, Receiving, sorting, Storing, Picking and dispatch activities. The process of coordinating with assembly line regarding their requirement and addressing the same in the timely manner. Video showing the activities coupled with learning group activities connected with in plant logistics.
Professional Skill 125 Hrs.; Professional Knowledge 23 Hrs.	Apply knowledge of different inventory models, storage handling equipment and compute based inventory, counting tools to meet the job	**Basic inventory management** 15. Carry out different types of inventory management – FIFO, LIFO, etc. 16. Practical applications of inventory management.	**Basic inventory management** Elaborate receiving and storage processes. Basics of allocation of Goods storage location

	requirement and increase productivity.	(Through video files) 17. Perform Receiving and storage processes. (Through team activities) 18. Perform allocation of Goods storage location. (Through team activities) 19. Follow Do's and Don'ts during Inventory counting. 20. Follow good practices associated with inventory management and handling.	Introduction to different types of inventory management – FIFO, LIFO, etc. Basic advantages, benefits, challenges associated with inventory models and suitability to different manufacturing setups Keeping the inventory count and records under various methods. Changing inventory levels Cross verification of Inventory Do's and Don'ts during Inventory counting Various good practices associated with inventory management and handling and their benefits.
Professional Skill 125 Hrs.; Professional Knowledge 23 Hrs.	Validate the technical specification of various handling equipment which helps during movement processes	**Use of Machineries and Equipments in in-plant logistics** 21. Use of computer based scanners, RFID scanners, other associated software. 22. Use communication Devices to track and count inventory. 23. Select MHEs like forklift, etc., based on their capacity, their usage, their technical limitations, and suitability of use for different activities. 24. Watch Video demonstrating use of MHEs in different in-plant setups,	**Use of Machineries and Equipments in in-plant logistics** Knowledge on Computer and Associated software Communication Devices used in warehouse environment to track and count inventory Knowledge on Scanning equipment including Bar Scanner and RFID used Various MHEs like forklift, etc., their capacity, their usage, their technical

		their technical and practical limitations, etc.	limitations, suitability of use for different activities.
Professional Skill 150 Hrs.; Professional Knowledge 30 Hrs.	Carryout activities based on daily receipt and dispatch instructions received.	**Inbound process** 25. Identify and classify different types of raw materials / goods and segregate them. 26. Identify and select the right equipment for different scenarios and products. 27. Identify different types of forms and reports available select the proper one. Read and fill them correctly without any error. 28. Identify/ read the requirement of the manufacturing line and supply Maintain the required inventory of different items required for manufacturing line. 29. Co-ordinate with vendors for timely supply of appropriate quantities of items based on usage norms and requirement of manufacturing setup /line. 30. Verify goods at the time of receipt of goods. 31. Use basic formats and reports associated with receipt of good sat the time of receipt of goods. 32. Update counts daily in routine. 33. Plan and schedule deliveries as per requirement of	**Inbound process** Different types of raw materials and intermediary goods that can be procured ad stored Various WIP and finished goods that can be stored How to read the requirement of the manufacturing line and maintaining the required inventory of different items Co-coordinating with vendors of timely supply of appropriate quantities of items based on usage norms and requirement of manufacturing setup The various verifications to be undertaken at the time of receipt of goods The basic formats and reporting associated with receipt of goods Updating of counts in routine Planning and scheduling deliveries as per requirement Various best practices associated with handling in-

		manufacturing setup /line. 34. Follow various best practices associated with handling in-plant logistics activities. 35. Visit a site of an industrial setup showing efficient inbound process management and follow.	plant logistics
Professional Skill 100 Hrs.; Professional Knowledge 22 Hrs.	Develop schedules and prioritize activities so as to plan every day without any delays.	**Out-bound process** 36. Read and verify dispatch orders and collect acknowledgment and delivery reports. 37. Select the right equipment for different scenarios and products. 38. Make a visit to industrial setup showing efficient outbound process management and follow the process. 39. Identify/Read the requirement instructions coming from manufacturing setup and act. 40. Follow the process. Identify the item and the required carrier to carry/transport. 41. Plan and Schedule delivery so that there is no delay and the carrier resource is utilized in the most efficient manner. 42. Carry out dispatch activities and generate dispatch record, verify number and type of product, collect	**Out-bound process** Different dispatch orders and associated signing authorities How to read requirement instructions coming from manufacturing setup Process of identifying the item and the required carrier. Scheduling delivery so that there is no delay and the carrier resource is utilized in the most efficient manner Activities to be conducted in dispatch - generate dispatch record, verify number and type of product, collect acknowledgement of dispatch How to co-ordinate with manufacturing and delivery team to ensure delivery and collect delivery reports

		acknowledgement of dispatch. 43. Co-ordinate with manufacturing and delivery team to ensure delivery and collect delivery reports. 44. Follow various good practices associated with product handling and their benefits.	Various good practices associated with product handling and their benefits
Professional Skill 50 Hrs.; Professional Knowledge 08 Hrs.	Explain Reporting Activities, MIS System and its use.	**Reporting** 45. Prepare reports related to inventory change, dispatches, delivery success, inbound receipts, etc. 46. Use MIS systems for reporting use Microsoft excel and office. Watch video of MIS systems generating reports. 47. Follow various good practices associated with reporting activities and their benefits.	**Reporting** Different types of reports related to inventory change, dispatches, delivery success, inbound receipts, etc. Different types of MIS systems that are commonly used for reporting Making and updating reports in MIS ad or Microsoft excel and office. Various good practices associated with reporting activities and their benefits.
ENGINEERING DRAWING (40 HOURS)			
Professional Knowledge ED- 40 Hrs.	Read and apply engineering drawing for different application in the field of work.	Introduction to Engineering Drawing and Drawing Instruments– • Conventions • Sizes and layout of drawing sheets • Title Block, its position and content • Drawing Instrument Free hand drawing of – • Geometrical figures and blocks with dimension • Transferring measurement from the given object to the sketches. • Free hand drawing of hand tools. Drawing of Geometrical figures: • Angle, Triangle, Circle, Rectangle, Square, Parallelogram. • Lettering & Numbering – Single Stroke.	

		• Reading of dimension and Dimensioning Practice. Symbolic representation – • Different packing and labeling materials used in the trades. Reading of Warehouse layout / Job stacking/ pallet stack drawing plan
WORKSHOP CALCULATION & SCIENCE (40 HOURS)		
Professional Knowledge WCS- 40 Hrs.	Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study.	**Unit, Fractions** Classification of unit system Fundamental and Derived units F.P.S, C.G.S, M.K.S and SI units Measurement units and conversion Factors, HCF, LCM and problems Fractions - Addition, substraction, multiplication & division Decimal fractions - Addition, subtraction, multiplication & division Solving problems by using calculator **Square root, Ratio and Proportions, Percentage** Square and square root Simple problems using calculator Applications of Pythagoras theorem and related problems Ratio and proportion Ratio and proportion - Direct and indirect proportions Percentage Percentage - Changing percentage to decimal and fraction **Material Science** Types metals, types of ferrous and non-ferrous metals Physical and mechanical properties of metals **Mass, Weight, Volume and Density** Mass, volume, density, weight and specific gravity, numerical related to L, C, O section only Related problems for mass, volume, density, weight and specific gravity **Heat & Temperature and Pressure** Concept of heat and temperature, effects of heat, difference between heat and temperature, boiling point & melting point of different metals and non-metals Concept of pressure - Units of pressure, atmospheric pressure, absolute pressure, gauge pressure and gauges used for measuring pressure **Basic Electricity**

		Introduction and uses of electricity, molecule, atom, how electricity is produced, electric current AC, DC their comparison, voltage, resistance and their units Conductor, insulator, types of connections - series and parallel Ohm's law, relation between V.I.R & related problems Electrical power, energy and their units, calculation with assignments Magnetic induction, self and mutual inductance and EMF generation Electrical power, HP, energy and units of electrical energy **Mensuration** Area and perimeter of square, rectangle and parallelogram Surface area and volume of solids - cube, cuboid, cylinder, sphere and hollow cylinder **Levers and Simple machines** Simple machines - Effort and load, mechanical advantage, velocity ratio, efficiency of machine, relationship between efficiency, velocity ratio and mechanical advantage Lever & Simple machines - Lever and its types
Project work / Industrial visit **Broad Areas:** a) Inbound process management and outbound process. b) Generating reports using MIS systems c) Good practices associated with reporting activities and their benefits. d) Use of MHEs in different in-plant setups, their technical and practical limitations, etc.		

SYLLABUS FOR CORE SKILLS
1. Employability Skills (Common for all CTS trades) (120 Hrs.)

Learning outcomes, assessment criteria, syllabus and Tool List of Core Skills subjects which is common for a group of trades, provided separately in www.bharatskills.gov.in / www.dgt.gov.in

List of Tools & Equipment			
In Plant Logistics Assistant (for batch of 20 Candidates)			
S No.	**Name of the Tools and Equipment**	**Specification**	**Quantity**
A. TRAINEES TOOL KIT (For each additional unit trainees tool kit Sl. 1-12 is required additionally)			
1.	Safety Shoes		(20 +1) pairs
2.	Safety Helmet		(20 +1) Nos.
3.	Gloves		(20 +1) pairs.
4.	Reflector Jackets		(20 +1) Nos.
5.	Ear Plugs		(20 +1) pairs.
6.	Industrial Goggles		(20 +1) Nos.
7.	SOP Charts		(20 +1) Nos.
8.	Safety Norms Handbook		(20 +1) Nos.
9.	Technical specification Sheet		1x5 sets (1 (each/packing machines type)
10.	Material Safety Data Sheet		(20 +1) Nos.
11.	DO's and Don'ts Sheet		1x5 sets (1 (each/packing machines type)
B. SHOP TOOLS & EQUIPMENT – For 2 (1+1) units no additional items are required			
(i) List of Tools & Accessories			
12.	Tools required for assembly line set up		As required
(ii) List of Equipment			
13.	MHE equipment's Battery Operated Pallet Truck, Forklift, Reach Truck and Order Picker		1each
14.	Demarcation equipment		1 No.
15.	Pallets		5 Nos.
16.	Packaging materials		25 Nos.
17.	Packaging devices		10 Nos.
18.	Alarm		1 No.
19.	Scanner		15 Nos.
20.	PPE		15 Nos.
C. Shop Machinery			

21.	Assembly of components Set up		As required
D. Shop Floor Furniture and Materials - For 2 (1+1) units no additional items are required			
22.	Working Bench	2.5 m x 1.20 m x 0.75 m	4 Nos.
23.	white board	4 feet x 6 feet	1 No.
24.	Instructor's table	Suitable size	1 No.
25.	Instructor's chair	Normal class room chair	2 Nos.
26.	Metal Rack	100cm x 150cm x 45cm	4 Nos.
27.	Lockers with drawers		1 for Each Trainee
28.	Almirah	2.5 m x 1.20 m x 0.5 m	1 No.
29.	Black board/	(minimum 4X6 feet)	1 No.
30.	Fire Extinguisher	Arrange all proper NOCs and equipment from municipal / competent authorities.	2 Nos.
31.	Projector		1 No.
32.	Video player or TV		1 No.
33.	Printer		1 No.
34.	Tracker		1 No.
35.	Safety Norms Handbook		25 Nos.
36.	Technical specification Sheet		25 Nos.
37.	SOP		10 Nos.
38.	Computer		1 No.
39.	Stationeries		25 Nos.
40.	Marker		2 No.

Note: -

1. *All the tools and equipment are to be procured as per BIS specification.*
2. *Internet facility is desired to be provided in the class room.*

ANNEXURE-II

The DGT sincerely acknowledges contributions of the Industries, State Directorates, Trade Experts, Domain Experts, trainers of ITIs, NSTIs, faculties from universities and all others who contributed in revising the curriculum.

Special acknowledgement is extended by DGT to the following expert members who had contributed immensely in this curriculum.

List of Expert Members contributed/ participated for finalizing the course curriculum of In Plant Logistics Assistant trade			
S No.	**Name & Designation**	**Organization**	**Remarks**
1.	Sh. J. D. Masilamani , Director	DGT HQ, New Delhi	STCC Convener
2.	Sh. C. S. Murthy, JDT	CSTARI Kolkata	Member
3.	Sh. M Kumarvel, Deputy Director	NSTI Banglore	Representative from NSTI
4.	Sh. T V Rajasekhar, Deputy Director	NSTI Chennai	Representative from NSTI
5.	Sh. Aryan Jangra, Assistant Direct	TT Cell, DGT HQ	Representative from RDSDE
6.	Sh. Subhankar Bhowmick, Assistant Manager	NIMI Chennai	Representative from NIMI
7.	Sh. S. Bandopadhyay, Training Officer	CSTARI Kolkata	Representative from CSTARI
8.	Sh. Lokpal, Principal	Govt ITI Pusa., New Delhi	Representative from State Directorate
9.	Capt. Ramanujam, CEO	Logistics SSC, Chennai	Representative from SSC
10.	Dr. T C Saravabava, Head – Apprenticeship	LSC, Chennai	Representative from SSC
11.	Sh. Anil Kumar Srivastava	Under Secretary(Logistics), New Delhi	Representative from Ministry of Commerce
12.	Sh. S A Mohan, CEO	Armes Maini Storage Systems, Bengaluru	Representative from Industry
13.	Sh. S Ramachandran, General Manager	TVS Supply Chain Solutions, Chennai	Representative from Industry
14.	Sh. Ashish Singh, Principal,	Adarsh Rashtriya Pvt ITI. Cholapur, Varanasi	Representative from private ITI association

15.	Dr. M.V.Venkatesan, DGM	L & T Construction, Chennai	Expert
16.	G. Sunderraj , Director, Production Management & V P S	Volvo CE India Private Ltd. Plot-7,8 and 12 Phase 1 Peenya Industrial Area, Peenya Bengaluru-560058	Expert
17.	D.V. Vishnu Swarup, Sr. DGM	Bharat Electronics Ltd. Jalahalli Post, Bengaluru-560013	Expert
18.	Kashinath M Patnasetty, Head: Value Added Service	Ace Designers Ltd., Plot No. 7 & 8, II Phase Peenya Industrial Area, Bengaluru-560058	Expert
19.	Sh. R.N. Manna, TO	CSTARI, Kolkata	Member
20.	Sh. Bharat Kumar Nigam, TO	CSTARI, Kolkata	Member
21.	Ashoke Rarhi, DDT	CSTARI, Kolkata	Member
22.	K.V.S. Narayana, Training Officer	CSTARI, Kolkata	Member
23.	P. K. Bairagi, Training Officer	CSTARI, Kolkata	Member
24.	Sh. B Biswas, Training Officer	CSTARI Kolkata	Member
25.	Akhilesh Pandey, Training Officer	CSTARI, Kolkata	Member

ABBREVIATIONS

CTS	Craftsmen Training Scheme
ATS	Apprenticeship Training Scheme
CITS	Craft Instructor Training Scheme
DGT	Directorate General of Training
MSDE	Ministry of Skill Development and Entrepreneurship
NTC	National Trade Certificate
NAC	National Apprenticeship Certificate
NCIC	National Craft Instructor Certificate
LD	Locomotor Disability
CP	Cerebral Palsy
MD	Multiple Disabilities
LV	Low Vision
HH	Hard of Hearing
ID	Intellectual Disabilities
LC	Leprosy Cured
SLD	Specific Learning Disabilities
DW	Dwarfism
MI	Mental Illness
AA	Acid Attack
PwD	Person with disabilities


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