

Model Curriculum

DTH Set-Top Box Installer and Service Technician

SECTOR: ELECTRONICS

SUB-SECTOR: COMMUNICATIONS & BROADCASTING

OCCUPATION: AFTER SALES SERVICE

REF ID: ELE/Q8101 VERSION 1.0

NSQF LEVEL: 4



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DTH SET-TOP BOX INSTALLER AND SERVICE TECHNICIAN

CURRICULUM / SYLLABUS

This course encompasses 3 out of 3 National Occupational Standards (NOS) of “DTH Set-top Box Installer and Service Technician” Qualification Pack issued by “Electronic Sector Skill Council”.

Program Name	DTH Set-top Box Installer and Service Technician		
Qualification Pack Name & Reference ID. ID	ELE/Q8101 VERSION 1.0		
Version No.	1.0	Version Update Date	07-May-2017
Pre-requisites to Training	8th Standard pass*/ 10 th Standard Pass / Diploma * with 2 years' work experience		
Training Outcomes	<p>After completing this programme, participants will be able to:</p> <ul style="list-style-type: none"> • Express excellence in customer service. • Establish Moments of Truth. • Understand the basic steps in a Service Call • Employ rapport building skills • Demonstrate valuing. • Communicate effectively. • Respond to non-verbal cues in communication. • Differentiate between the styles of communication. • Demonstrate appropriate listening skills. • Empathize to gain trust. • Take ownership and resolve problems. • Handle difficult customers. • Probe customers for better understanding 		

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	Introduction Theory Duration (hh:mm) 06:00 Practical Duration (hh:mm) 06:00 Corresponding NOS Code ELE/N8102	<ul style="list-style-type: none"> Getting to know each other <ul style="list-style-type: none"> Welcoming the participants To create awareness about the company and its core values. To create Pride in the brand value of DTH <ul style="list-style-type: none"> Daily Life Video Introduction to DTH - Quiz 	<ul style="list-style-type: none"> Videos Powerpoint Laptop Projector Projector Screen White Board Marker Duster Attendance Sheet Feedback Form Internet
2	Role Clarity Theory Duration (hh:mm) 04:00 Practical Duration (hh:mm) 06:00 Corresponding NOS Code ELE/N9951	<ul style="list-style-type: none"> To provide an Overall understanding of the process (Service Model) To help the participants get role clarity and understand their daily activities. <ul style="list-style-type: none"> Work flow, Roles and Responsibilities 	<ul style="list-style-type: none"> Videos Powerpoint Laptop Projector Projector Screen White Board Marker Duster Attendance Sheet Feedback Form Internet
3	Customer Service / Focus Theory Duration (hh:mm) 06:00 Practical Duration (hh:mm) 08:00 Corresponding NOS Code ELE/N8102	<ul style="list-style-type: none"> To create an understanding of customer needs and ways in which they can ensure customer satisfaction. What does customer want? How to achieve customer satisfaction? 	<ul style="list-style-type: none"> Customer Application Form Feedback Form Packages Form Props depending on Activity
4	Customer Focus Theory Duration (hh:mm) 04:00 Practical Duration (hh:mm) 08:00 Corresponding NOS Code ELE/N8102	<ul style="list-style-type: none"> To creating an understanding of customer needs and ways in which they can ensure customer satisfaction. Promptness To establish the importance of prompt resolution To establish the importance of visiting a subscribers personal space – Their Home. Respecting Personal Space To create an understanding of active listening skills <ul style="list-style-type: none"> Listening Skills 	<ul style="list-style-type: none"> Videos Powerpoint Laptop Projector Projector Screen White Board Marker Duster Attendance Sheet Feedback Form Internet

5	<p>Handling dissatisfied /Irate customers</p> <p>Theory Duration (hh:mm) 04:00</p> <p>Practical Duration (hh:mm) 08:00</p> <p>Corresponding NOS Code ELE/N8102</p>	<ul style="list-style-type: none"> Understand the issue and provide resolution to issue faced by subscriber What are the customer expectations? Reasons for customer to get Irate? How to handle irate situation? 	<ul style="list-style-type: none"> Customer Application Form Feedback Form Packages Form Props depending on Activity
6	<p>DTH Installation</p> <p>Theory Duration (hh:mm) 04:00</p> <p>Practical Duration (hh:mm) 06:00</p> <p>Corresponding NOS Code ELE/N8105</p>	<ul style="list-style-type: none"> Understand the procedure followed in Installation of DTH Installation Video of DTH 	<ul style="list-style-type: none"> For Demo: <ul style="list-style-type: none"> a) Reflector Antenna b) RJ 6 cable c) Connectors d) Set up box (exclusive for DTH) e) Remote
7	<p>Dish Assembly</p> <p>Theory Duration (hh:mm) 04:00</p> <p>Practical Duration (hh:mm) 06:00</p> <p>Corresponding NOS Code ELE/N8105</p>	<ul style="list-style-type: none"> To explain and practise the assembling the different component of Dish assembly Reflector Dish Assembly 	<ul style="list-style-type: none"> For Demo: <ul style="list-style-type: none"> a) Reflector Antenna b) RJ 6 cable c) Connectors d) Set up box (exclusive for DTH) e) Remote
8	<p>Mount Assembly</p> <p>Theory Duration (hh:mm) 04:00</p> <p>Practical Duration (hh:mm) 06:00</p> <p>Corresponding NOS Code ELE/N8105</p>	<ul style="list-style-type: none"> To explain the mounting, LOS, Signal Peaking etc. Mount Assembly 	<ul style="list-style-type: none"> Videos Powerpoint Laptop Projector Projector Screen White Board Marker Duster Attendance Sheet Feedback Form Internet

9	Connectorization Theory Duration (hh:mm) 04:00 Practical Duration (hh:mm) 06:00 Corresponding NOS Code ELE/N8105	<ul style="list-style-type: none"> • Demonstrate and Practise connectorization • Connectorization of cable with box and LNBF 	<ul style="list-style-type: none"> • Tool Kit: <ol style="list-style-type: none"> a) Spanners -10,11, 12, 13mm b) Ring Spanners- 10,11,12,13mm c) Screw drivers- Plus Minus, Philips d) Drilling Machines- 8mm,10,mm,12mm
10	Signal Peaking Theory Duration (hh:mm) 04:00 Practical Duration (hh:mm) 06:00 Corresponding NOS Code ELE/N8105	<ul style="list-style-type: none"> • To gauge the adeptness of trainees in signal peaking using Sat finder, Connectorization tool and inclinometer • Signal peaking with Sat finder 	
11	HD PVR Installation and VOD connection Theory Duration (hh:mm) 05:00 Practical Duration (hh:mm) 06:00 Corresponding NOS Code ELE/N8105	<ul style="list-style-type: none"> • HD PVR installation • To explain the difference between the boxes. • To explain them the process of installing a HD/HD PVR box 	<ul style="list-style-type: none"> • Tool Kit: <ol style="list-style-type: none"> a) Spanners -10,11, 12, 13mm b) Ring Spanners- 10,11,12,13mm c) Screw drivers- Plus Minus, Philips d) Drilling Machines- 8mm,10,mm,12mm • For Tracking : <ol style="list-style-type: none"> a) Satellite Meter b) Service Cables c) Satellite Finder • For cabling: <ol style="list-style-type: none"> a) Cable Tiles, P clips b) Cable Preparation Tool • Others: <ol style="list-style-type: none"> a) Set up of a moving Wall(8.5'x1.25') b) Compression Tool c) Tape d) Compass • Cables (10 mtrs) • Television with HDMI input & output & Basic Home Theatre <p>As mentioned in NOS: Multi meter, Hand tools like</p>

			Tester, Spanner, Cutter, Angle finder, Satellite Meter, Drilling Machine, RF Strength Meter
12	HD PVR Installation and VOD connection Theory Duration (hh:mm) 05:00 Practical Duration (hh:mm) 06:00 Corresponding NOS Code ELE/N8105	<ul style="list-style-type: none"> • HD PVR Installation and VOD connection 	<ul style="list-style-type: none"> • Television with HDMI input & output & Basic Home Theatre <p>As mentioned in NOS:</p> <p>Multi meter, Hand tools like Tester, Spanner, Cutter, Angle finder, Satellite Meter, Drilling Machine, RF Strength Meter</p>
13	Troubleshooting Theory Duration (hh:mm) 05:00 Practical Duration (hh:mm) 06:00 Corresponding NOS Code ELE/N8105	<ul style="list-style-type: none"> • Standard box <ul style="list-style-type: none"> • Common issues with STD boxes • Trouble Shooting steps • HD Box <ul style="list-style-type: none"> • Common issues with HD Box. • Trouble shooting steps • HD PVR Box <ul style="list-style-type: none"> • Common issues with HD PVR Box. • Trouble shooting steps 	<ul style="list-style-type: none"> • Multi meter • Hand tools like Tester, Spanner, Cutter • Angle finder • Satellite Meter • Drilling Machine • RF Strength Meter
14	DTH Packages Theory Duration (hh:mm) 05:00 Practical Duration (hh:mm) 06:00 Corresponding NOS Code ELE/N8105	<ul style="list-style-type: none"> • Understand different types of packages provided by DTH 	<ul style="list-style-type: none"> • Videos • Powerpoint • Laptop • Projector • Projector Screen • White Board • Marker
15	DTH Product Theory Duration (hh:mm) 04:00 Practical Duration (hh:mm) 06:00 Corresponding NOS Code ELE/N8105	<ul style="list-style-type: none"> • Understand different products of DTH • Standard, HD and HD PVR box and its features. • VoD etc and its features 	<ul style="list-style-type: none"> • Videos • Powerpoint • Laptop • Projector • Projector Screen • White Board • Marker

16	Demo of STD Box Theory Duration (hh:mm) 04:00 Practical Duration (hh:mm) 08:00 Corresponding NOS Code ELE/N8105	<ul style="list-style-type: none"> To create an understanding of the features to be covered in the Demo Provide demonstration of STD box to Subscriber post installation 	<ul style="list-style-type: none"> STD Box
17	Demo of HD / HD PVR Box Theory Duration (hh:mm) 04:00 Practical Duration (hh:mm) 08:00 Corresponding NOS Code ELE/N8105	<ul style="list-style-type: none"> To create an understanding of the features to be covered in the Demo Provide demonstration of HD/HD PVR box and VoD to Subscriber post installation 	<ul style="list-style-type: none"> HD / HD PVR Box
18	KAT Certification Theory Duration (hh:mm) 04:00 Practical Duration (hh:mm) 08:00 Corresponding NOS Code ELE/N8105	<ul style="list-style-type: none"> To Assess the training outcome Assessment questions in MCQ, Fill in the blanks, Match the following, State true or false 	<ul style="list-style-type: none">
	Total Duration Theory Duration 80:00 Practical Duration 120:00	Unique Equipment Required: <ul style="list-style-type: none"> Angle Meter Cable Cable Ties Digital Multimeter Dish Antenna Drill Machine Line Tester QAM Meter RF Strength Meter Safety Gloves Safety Helmet Safety Shoes Satelite Meter Screw Driver Set Set Top Box Spanner Set Television 	

Grand Total Course Duration: **200 Hours 00 Minutes**

(This syllabus/ curriculum has been approved **Electronics Sector Skills Council of India**)

Annexure A: TRAINER Pre-Requisites

Trainer Prerequisites for Job role: “DTH Set-top Box Installer and Service Technician” mapped to Qualification Pack: “ELE/ Q 8101 Version1.0”

Sr. No.	Area	Details
1	Job Description	Set top box technician is responsible for installing the set top box at client's site (households) and also addresses the first level complaints and servicing, they also co-ordinates with the technical team for activation of new connections
2	Personal Attributes	The individual must be willing to work in the field and travel through the day from one customer's premise to another. Punctuality, amenable behaviour, patience, good interpersonal relationship building, trustworthiness, integrity, and critical thinking are important attributes for this Job
3	Minimum Educational Qualifications	Diploma in Electronics with at least 1-2 years of experience in installation and troubleshooting of Set Top Box and Direct to Home (DTH) systems. Should have excellent communication skills
4a	Domain Certification	Certified for Job Role: “ <u>DTH Set-top Box Installer and Service Technician</u> ” mapped to QP: “ <u>ELE/Q8101 version 1.0</u> ”. Minimum accepted score =70%
4b	Platform Certification	Recommended that the Trainer is certified for the Job Role: “Trainer”, mapped to the Qualification Pack: “SSC/1402”. Minimum accepted score =70%
5	Experience	1-2 years of experience in installation and troubleshooting of Set Top Box and Direct to Home (DTH) systems

Annexure B: ASSESSMENT Criteria

Assessment Criteria for DTH Set-top Box Installer and Service Technician	
Job Role	DTH Set-top Box Installer and Service Technician
Qualification Pack	ELE/ Q8101 version1.0
Sector Skill Council	Electronic

Sr. No.	Guidelines for Assessment
1	Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2	The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3	Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training centre (as per assessment criteria below)
4	Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criteria
5	To pass the Qualification Pack, every trainee should score a minimum of 70% in each NOS
6	In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.

Element	Performance Criteria	Total Marks (300)	Out Of	Marks Allocation	
				Theory	Skills Practical
1. ELE/N8105 Install and repair DTH set top box	PC1. understand the work order and site details of the customer from the superior and customer	100	5	2	3
	PC2. coordinate with stores department to collect the set box and other components or tools required for installation or servicing such as drilling machine, satellite meter, multi-meter		5	2	3
	PC3. identify the location for installing the Dish Antenna (LNB) as per the specific requirements in case of DTH		5	1	4
	PC4. drill and fix dish antenna (LNB)		4	1	3
	PC5. align it correctly using the satellite meter		4	2	2
	PC6. install set top box and check signal strength		4	1	3
	PC7. connect set top box with TV		3	1	2

	PC8. connect home theatre System with TV/ STB via HDMI, Audio/ Video/ Svideo/ SPDIF, etc.		5	2	3
	PC9. identify the fault responsible for unsatisfactory/interrupted service by checking wire, signal strength, connectors, set top box		8	3	5
	PC10. check the AC Mains output with the help of multi-meter and check the external power supply (Adaptor DC Output)		7	2	5
	PC11. rectify the problem and resume uninterrupted service to the satisfaction of client		10	2	8
	PC12. fill in the technical report of the fault found in the defective set top box and send to the L2 service centre where it will repaired		5	2	3
	PC13. maintain opening and closing documents for collection of material and testing devices from the stores		6	3	3
	PC14. collect necessary forms such as Customer Registration and Program Authentication Form and submit to relevant departments in the company		6	3	3
	PC15. collect customer identity (ID) proof and Customer feedback form		3	1	2
	PC16. achieve 100% installation and servicing as allotted		3	0	3
	PC17. rectify customer complaint at first visit itself		3	1	2
	PC18. ensure zero repetitive complaints		3	1	2
	PC19. ensure 100% complaints resolution		2	1	1
	PC20. minimize material consumed for resolving the complaint/fault		2	1	1
	PC21. carry out the work as per standards specified for the quality		2	1	1
	PC22. follow the safety standards as per company's policy		2	1	1
	PC23. ensure 100% functioning of the set top box such as Transponder, Signal Strength, Audio and Video quality, and Remote control		3	1	2
			TOTAL	100	35
2. ELE/N9951 Interact with other employees	PC1. understand work requirements, targets and incentives	100	7	3	4
	PC2. report problems identified in the field		8	4	4
	PC3. escalate customer concerns that cannot be handled on field		6	2	4
	PC4. resolve personnel issues		7	2	5
	PC5. receive feedback on work standards and customer satisfaction		6	3	3
	PC6. communicate any potential hazards at a particular location		6	2	4

	PC7. meet given targets		7	2	5
	PC8. deliver work of expected quality despite constraints		7	2	5
	PC9. have feedback from a happy and satisfied customer		6	2	4
	PC10. resolve inter-personnel conflicts and achieve smooth workflow		7	2	5
	PC11. receive spares from tool room or stores		7	2	5
	PC12. deposit faulty modules and tools to stores		6	2	4
	PC13. pass on customer complaints to colleagues in a respective geographical area		6	2	4
	PC14. assist colleagues with resolving field problems		7	2	5
	PC15. clearly demarcate roles of each team member		7	3	4
		TOTAL	100	35	65
3. ELE/N8102 Comprehend customer's requirement	PC1. check customer complaint registered at customer care or installation schedule	100	4	2	2
	PC2. call customer to confirm problem and fix time for visit		4	2	2
	PC3. greet the customer and confirm the problem registered		3	1	2
	PC4. be polite and patient when interacting with customer		3	1	2
	PC5. check about warranty status of appliance and annual maintenance contract		3	1	2
	PC6. anticipate possible problems to carry tools and parts accordingly		4	2	2
	PC7. ascertain customer location in order to make the route plan for the day		4	2	2
	PC8. enquire about the symptoms and history of problems in the appliance		5	2	3
	PC9. ask about the age of appliance and status of upkeep		5	2	3
	PC10. identify the problem based on customer's information		5	2	3
	PC11. communicate the problems identified and educate on possible reasons		5	2	3
	PC12. inform about costs involved		5	2	3
	PC13. discuss the problem(s) identified with customer		6	2	4
	PC14. suggest possible solutions and costs involved		7	3	4
	PC15. explain the time required and methodology for servicing necessary		6	3	3
	PC16. seek customer's approval on further action		6	4	2
	PC17. accurately assess the problem and		4	1	3

	solution(s) necessary				
	PC18. offer most appropriate and cost-effective service as per customer’s requirement		4	1	3
	PC19. communicate problem effectively in order to secure customer’s confidence		3	1	2
	PC20. ensure customer satisfaction and positive feedback		3	1	2
	PC21. record minimum customer complaints post service		3	1	2
	PC22. avoid repeat problem post service		4	1	3
	PC23. prepare most optimum route plan to complete daily target visits		4	1	3
		TOTAL	100	40	60