# Course Curricula

**Under**
**SKILL DEVELOPMENT INITIATIVE SCHEME (SDIS)**
**Based on**
## Modular Employable Skills (MES)

**on**

# TELECOM SECTOR

**Designed in 2011**

**Government of India**
**Ministry of Labour & Employment**
**Directorate General of Employment & Training**

**Course Curriculum under Skill Development Initiative Scheme (SDIS)**
**Based on Modular Employable Skills (MES)**
ON
# Telecom DTH Installation Technician

## *CONTENTS*

**List of members attended the Trade Committee Meeting for designing the course curriculum under Skill Development Initiative Skill (SDIS) based on Modular Employable Skills (MES) on Telecom Sector held on 22.09.2011 in the premises of Centum Work Skill India New Delhi.**

| Sl. No. | Name and Designation Mr. & Ms. | Organization | Remarks |
|---|---|---|---|
| 1. | S. J.Amalan, Director | DGE&T, C.S.T.A.R.I., Kolkata-91 | Chairman |
| 2. | L.K.Mukherjee, Deputy Director | DGE&T, C.S.T.A.R.I., Kolkata-91 | Member |
| 3. | Pranav Choudhary, Assistant Director | DGE&T, New Delhi | Member |
| 4. | Pabitra Ghosh, Assistant Director | DGE&T, New Delhi | Member |
| 5. | P.K.Dutta, Astt. Director | DGE&T, C.S.T.A.R.I., Kolkata-91 | Member |
| 6. | D.K.Kaushik, Training Officer | DGE&T, New Delhi | Member |
| 7. | Captain Rohit Baswani, Managing Director | Vijayant Security Service Pvt Ltd. Delhi | Member |
| 8. | Major General (retd) A.K.Sakhuja | Proman Security Services, Pvt Ltd, Delhi | Member |
| 9. | Nilesh Kargaonkar, Country Security Advisor | World Bank Group, India | Member |
| 10. | Mahendra Singh Karakoti, Head Security | Nokia Seimens Networks, New-Delhi | Member |
| 11. | Gurpawan (Garry) Singh, Managing Director | Pinkerton India Pvt Ltd, New-Delhi | Member |
| 12. | Sanjay Bajaj, National Head Content & S Standards | Centum Workskills India Ltd, New Delhi | Member |
| 13. | Ms. Eliza Ronald George, Lead Content | Centum Workskills India Ltd, New Delhi | Member |
| 14. | Kamal Issrani, Lead Content | Centum Workskills India Ltd, New Delhi | Member |
| 15. | Lalit Dalal | Centum Workskills India Ltd, New Delhi | Member |

**Skill Development based on Modular Employable Skills (MES)**

## Background

The need for giving emphasis on Skill Development, especially for the educated unemployed youth (both for rural & urban) has been highlighted in various forums. Unfortunately, our country's current education system does not give any emphasis on development of skills. As a result, most of the educated unemployed youths are found wanting in this area, which is becoming their Achilles heel.

As India is on the path of economic development and the share of service sector's contribution to the GDP of the country is increasing (53% of GDP) it is becoming imperative that Government of India along with other nodal agencies play an important role in providing employable skills, with special emphasis on Skills.

Hence, need of the hour is some policy change at Apex level which will address the needs of the changing economy and look at providing mandatory skills training to all educated unemployed youths, with a view to have them gainfully employed. This shift in policy will ultimately benefit all the stake holders, namely the individuals, industry, Government and the economy by way of providing employment, increasing the output/productivity and ultimately resulting in a higher GDP for the nation.

- **Frame work for skill development based on 'Modular Employable Skills (MES)'**
  Very few opportunities for skill development are available for the above referred groups (educated unemployed youth). Most of the existing skill development programmes are long term in nature. Poor and less educated persons cannot afford long term training programmes due to higher entry qualifications, opportunity cost, etc. Therefore, a new framework for skill development has been evolved by the DGET to address the employability issues.
  The **key features of new framework for skill development** are:
- Demand driven short term training courses based on modular employable skills are decided in consultation with Industries.
- Flexible delivery mechanism (part time, week ends, full time)
- Different levels of programmes (foundation level as well as skill up gradation) to meet demands of various target groups
- Central Government will facilitate and promote training while vocational training providers (VIPs) under the Govt. and Private Sector will provide training
- Optimum utilization of existing infrastructure to make training cost effective.

- Testing of skills of trainees by Independent Assessing Bodies (IABs) who would not be involved in conducting training programme, to ensure that it is done impartially.
- Testing & Certification of prior learning (skills of persons acquired informally)

The Short Term courses would be based on "Modular Employable Skills (MES)". The **concept for the MES** is:

- ✓ Identification of minimum skills set, which is sufficient to get an employment in the labour market.
- ✓ It allows skills up gradation, multi skilling, multi entry and exit, vertical mobility and life long learning opportunities in a flexible manner.
- ✓ It also allows recognition of prior learning (certification of skills acquired informally) effectively.
- ✓ The modules in a sector when grouped together could lead to a qualification equivalent to National Trade Certificate or higher.
- ✓ Courses could be available from level 1 to level 3 in different vocations depending upon the need of the employer organizations.
- ✓ MES would benefit different target groups like:

  - Workers seeking certification of their skills acquired informally
  - Workers seeking skill upgradation
  - Early school drop-outs and unemployed
  - Previously child Labour and their family

## INTRODUCTION

Economic growth in India is increasingly supported by robust industrial growth. Telecom sector is one of the relatively lesser known but significant sectors that support almost all industrial activity. However, notwithstanding its importance and size (INR 4 trillion), it has traditionally not been accorded the attention it deserves as a separate sector in itself. The level of inefficiency in Telecom activities in the country has been very high across all modes.

The required pace of efficiency and quality improvement will demand rapid development of capabilities of Telecom service providers. And with Telecom being a service oriented sector, skill development will emerge as a key capability.

This lack of focus on developing manpower and skills for the Telecom has resulted in a significant gap in the numbers and quality of manpower in the sector.

This gap, unless addressed urgently, is likely to be a key impediment in the growth of the Telecom Sector in India and in consequence, could impact growth in industry and manufacturing sectors as well.

This underscores the need identifying areas where such manpower and skill gaps are critical, and developing focused action plans to improve the situation.

A look at the required initiatives for manpower development in the above sector makes it clear that sustainable development of the sector's manpower requires a collaborative public private effort. The level of commitment demonstrated by each stakeholder would largely determine the direction that the sector heads towards.

## Age of participants
The minimum age limit for persons to take part in the scheme is 18 years but there is no upper age limit.

## Curriculum Development Process

Following procedure is used for developing course curricula
• Identification of Employable Skills set in a sector based on division of work in the Labour market.
• Development of training modules corresponding to skills set identified so as to provide training for specific & fit for purpose
• Organization of modules in to a Course Matrix indicating vertical and horizontal mobility. The course matrix depicts pictorially relation among various modules, pre requisites for higher level modules and how one can progress from one level to another.
• Development of detailed curriculum and vetting by a trade committee and by the NCVT

 (Close involvement of Employers Organizations, State Governments and experts, Vocational Training Providers and other stakeholders are ensured at each stage).

## Development of Core Competencies
Possession of proper attitudes is one of the most important attributes of a competent person. Without proper attitudes, the performance of a person gets adversely affected. Hence, systematic efforts will be made to develop attitudes during the training programme.
The trainees deal with men, materials and machines. They handle sophisticated tools and instruments. Positive attitudes have to be developed in the trainees by properly guiding them and setting up examples of good attitudes by demonstrated behaviours and by the environment provided during training.

 Some important core competencies to be developed are:
1.  Communication skills
2.  Better usage of English language/Vernacular

3. Presentation skills
4. Self management
5. Resume preparation
6. GD participation/facing techniques
7. Interview facing techniques


Following competencies should also be developed during level-II and higher courses:

1. Ability for planning, organizing and coordinating
2. Creative thinking, problem solving and decision-making
3. Leadership
4. Ability to bear stress
5. Negotiation


## Duration of the Programme:

Time taken to gain the qualification will vary according to the pathway taken and will be kept very flexible for persons with different backgrounds and experience. Duration has been prescribed in hours in the curriculum of individual module, which are based on the content and requirements of a MES Module. However, some persons may take more time than the prescribed time. They should be provided reasonable time to complete the course.


### Pathways to acquire Qualification:

**Access to** the qualification could be through:
- ✠ An approved training Programme.


### Methodology

The training methods to be used should be appropriate to the development of competencies. The focus of the programme is on "performing" and not on "Knowing". Lecturing will be restricted to the minimum necessary and emphasis to be given for learning through active participation and involvement.

The training methods will be individual centered to make each person a competent one. Opportunities for individual work will be provided. The learning process will be continuously monitored and feedback will be provided on individual basis.

Demonstrations using different models, audio visual aids and equipment will be used intensively.

**Instructional Media Packages**

In order to maintain quality of training uniformly all over the country, Instructional Media Packages (Imps) will be developed by the National Instructional Media Institute (NIMI), Chennai.

**Assessment**

DGE&T will appoint assessing bodies to assess the competencies of the trained persons. The assessing body will be an independent agency, which will not be involved in conducting the training programme. This, in turn, will ensure quality of training and credibility of the scheme. Keeping in view, the target of providing training/testing of one million persons through out the country and to avoid monopoly, more than one assessing bodies will be appointed for a sector or an area.

**Certificate**

Successful persons will be awarded competency-based certificates issued by **National Council for Vocational Training (NCVT).**

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# Course Matrix
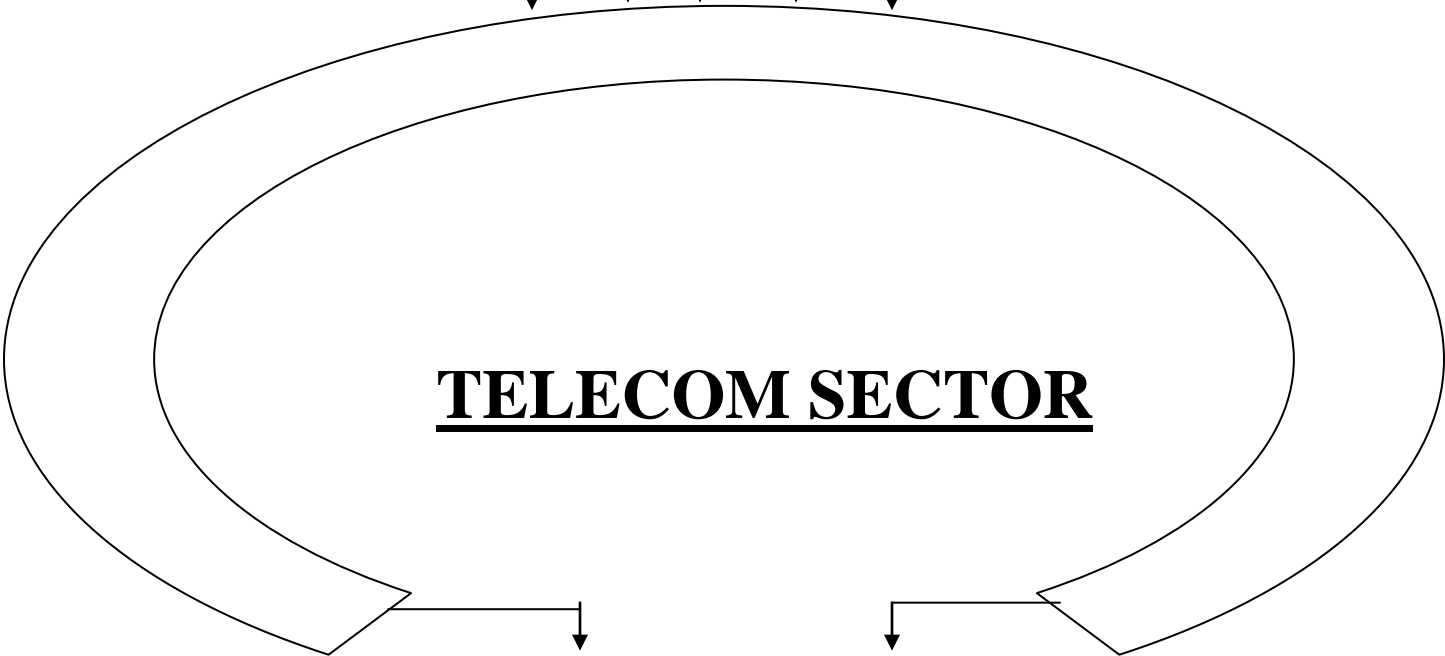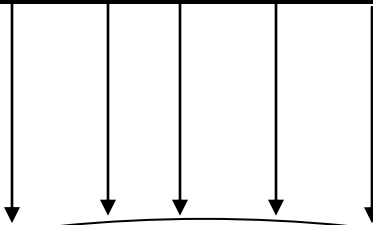
## TELECOM SECTOR

**TELECOM   DTH   INSTALLATION TECHNICIAN**
*MODULE*

# LEVEL – I
# MODULE- I

| | | |
|---|---|---|
| (1) Name | : | **Telecom DTH Installation Technician** |
| (2) Sector | : | **Telecom** |
| (3) Code No | : | **TLC 101** |
| (4) Entry Qualification | : | **10<sup>th</sup> Pass.** |
| (5) Age | : | **18 Years and above** |
| (6) Duration | : | **144 hrs** |
| (7) Terminal Competency | : | **After completion of training the trainee will able to work as Telecom DTH Installation Technician with various service providers.** |

**(8) COURSE CONTENTS** :

| SL.NO | Practical Competencies | Underpinning Knowledge |
|---|---|---|
| 1 | Listing major deliverables of Telecom DTH Installation Technician to create focus for effective performance. | Roles and Responsibilities of Telecom DTH Installation Technician. |
| 2 | Listing the components of Telecom DTH. Familiarization with various terms like Transmission/ Broadcasting/ Encryption used in Telecom DTH Technology. | Introduction to Telecom DTH Technology. |
| 3 | Identifying the tools in the Telecom DTH Installation kit. Demonstrating Safety while handling the Telecom DTH installation tools. Listing tips to maintain Telecom DTH installation tools. | Familiarization with Telecom DTH tools & equipments. Knowledge of Safety at work. |
| 4 | Demonstrating the Telecom DTH installation process (Hands-on). Identifying the importance of connectors & learn the process of cable preparation & connectorization. | Knowledge of Telecom DTH installation process. Knowledge of process of assembling, installing and connecting dish to STB. |

| | | |
|---|---|---|
| | Demonstrating the procedure for connecting dish with STB (Set Top box), checking signal level, SNR ( Signal to Noise Ratio), BER (Bit Error Rate) and barker channel. Demonstrate how to mobilize the service. | |
| 5 | Practice the processes for effective customer interaction. Demonstrating effective technical troubleshooting steps of fault and repair. Demonstrate Application & maintenance of PDA & WFMS ( Work Force Manage ment System) work flows. Identifying the items of the CRF ( Customer Relationship Form) & the categories to be filled. | Knowledge the process of: ^ Call Overview ^ Installation & Escalation ^ Service call process ^ Sub processes  Knowledge of work flow management system (WFMS) & Personal Digital Assistance (PDA). Knowledge of case report form. |
| 6 | Demonstrate effective communication & listening skills. Demonstrate proactive behavior at work. | Knowledge of communicative English and use basic communication skills for courtesy & comprehension. |

## List of tools, equipments & machineries for a batch of 20 trainees Telecom DTH Installation Technician

| 1 | Round Screw Driver | 21 nos |
|---|---|---|
| 2 | Bit pad | 5 nos |
| 3 | Extension Bit/rod | 5 nos |
| 4 | Detachable small handle screw driver | 21 nos |
| 5 | Detachable long handle screw driver | 5 nos |
| 6 | Tester | 21 nos |
| 7 | Slim line slot head screw driver | 5 nos |
| 8 | Double end spanner | 2 sets |
| 9 | Adjustable spanner | 2 nos |
| 10 | Measuring Tape | 2 nos |
| 11 | Snap-on knife/cutter | 2 nos |
| 12 | Spirit level meter | 2 nos |
| 13 | Heavy duty hammer | 5 nos |
| 14 | Pliers | 5 nos |
| 15 | Extension board | 2 nos |
| 16 | Compression Tool | 2 nos |
| 17 | Crimping Tool | 2 nos |
| 18 | Small hack saw frame | 5 nos |

| 19 | Component box | 2 sets |
|---|---|---|
| 20 | Blow pump | 2 nos |
| 21 | Brush & tray | As required |
| 22 | Drill machine(Piller) | 1 no |
| 23 | Drill machine (Portable) | 1 no |
| 24 | Drill Bits | 2 sets |
| 25 | Extension board | 1 no |
| 26 | Compass | Set of 5 nos |
| 27 | Sat-meter/ Sat-finder | 2 nos |
| 28 | Service Cable | 2 nos |
| 29 | Inclinometer | 2 nos |
| 30 | Digital Multimeter | 2 nos |
| 31 | AC line Detector | 2 nos |
| 32 | Torch | 5 nos |
| 33 | Goggle | 21 nos |
| 34 | Water bottle | As required |
| 35 | PDA | As required |
| 36 | Polythene sheet | As required |

## Antenna Assembly Components

| 1 | Foot Mount Bracket | | 11 nos |
|---|---|---|---|
| 2 | Mast | | 11 nos |
| 3 | Elevation Bracket | | 11 nos |
| 4 | Antenna Bracket | | 11 nos |
| 5 | LNBF Arm | | As required |
| 6 | Universal LNBF :<br>a) Single port universal LNBF<br>b) Dual port LNBF<br>c) Quad<br>d) Quattro | Used at MDUs. | 1 Connection<br>2 Connections<br>3 /4  Connections<br>More than 4 connections |
| 7 | Antenna Reflector | | 2 nos |
| 8 | Strut | | As required |
| 9 | Consumables :-<br>Insulation Tape, Nut bolts / screws, dish mounting NB, LNBF mounting NB, grounding screws, Anchor bolt | | As required |
| 10 | Permanent Marker | | As required |
| 11 | Cable tie | | As required |
| 12 | P- Clips | | As required |
| 13 | Sealant | | As required |