



Version 3

Delhi Metro Rail Academy

(Accredited under CBC's National Standards)

&

(ISO 9001: 2015 Certified)

Destination Excellence



DELHI METRO RAIL CORPORATION

Delhi Metro Rail Corporation was registered on 3rd May 1995 under the Companies Act 1956 for implementation of Delhi MRTS. It has equal equity participation from GOI and GNCTD. Delhi Metro is a state of art metro rail system in India. It is equipped with the most modern technology to ensure safety, reliability, punctuality and passenger comfort in train operations. Delhi Metro started its revenue operations on 25th Dec 2002 with a stretch of 8.5 kms between Shahdara and Tis Hazari. In pursuit of accomplishment of one of the stated mission, Delhi Metro network has witnessed a constant growth in last two decades now extending to a network length of 390.1 km (including Rapid Metro Gurgaon & Noida Greater Noida Aqua line) connecting the capital city with NCR regions of Gurugram, Noida, Faridabad, Bahadurgarh & Ghaziabad with future expansions in pipe line.



DMRA - AN ACADEMY PAR EXCELLENCE

Since its inception, DMRC has realized the need of competency building in rail based urban transportation systems. In its effort to impart world class training, a dedicated Training Institute was set up & inaugurated on 19th July 2002 in Shastri Park Train Depot of DMRC. The Institute underwent a major upgradation in 2019 and was rechristened as Delhi Metro Rail Academy (DMRA) on 18th September 2019.

The Academy has a sprawling campus of 5 acers and is located at relatively quieter but otherwise very well accessible location in Delhi. Shastri Park Train Depot, DMRC's first maintenance depot, is just adjacent to the Academy which facilitates hands-on experience to the trainees within the premises.

Over the years the Academy has successfully trained over 63,000 trainees of DMRC who have been instrumental in efficient and effective working of the organization. Besides this, the Academy has honour to train employees from many metros in India and abroad.

The Academy is well equipped with most modern training infrastructure and facilities to impart effective training in a technology enabled learning environment including Wi-Fi enabled campus.

The Academy has also spread its tentacles abroad by training employees from some of the overseas metros.

SOME FACTS ABOUT THE ACADEMY

Delhi Metro Rail Academy is accredited under Capacity Building Commission's National Standards as assessed by National Accreditation Board of Education and Training. The academy is also certified with ISO 9001:2015 Quality Management System accreditation for design, development and delivery of training programs. The Academy is equipped with state of art training infrastructure, most advanced Simulators for training in the field of operations and maintenance.

Delhi Metro Rail Academy is a premier training Academy in the country which is equipped to impart customized training on all aspects of Project as well as Operations and Maintenance of rail based urban transportation systems.

The Academy has distinction of developing staff capabilities and competence of not only DMRC employees but also from other metro systems in India.

The Academy offers holistic training in terms of knowledge, skill and attitude along with emphasis on physical, mental and spiritual health of the trainees.

The Academy has expertise in planning and organizing training for all the job profiles of Metro employees. We also offer customized metro based training for other metros and organizations. Besides organising Management Development Program on topics of Strategic & Project Management, Rail Based Urban Transportation as well as Advanced Training Programs on Ballastless Track, Concrete technology, Signalling & Train Control and Fare Collection Systems, the Academy conducts Advanced Management Program for senior executives on regular basis. Also, the Academy has expanded its horizons overseas with the training of MRT Jakarta, Dhaka and Sri Lankan officials.



MISSION

(Delhi Metro Rail Academy)

“We will continue to improve our working system with appropriate training”



To become the best training academy for all areas of Metro railway.



To enhance skills of the trainees by providing appropriate infrastructure and deploying competent trainers.



To simplify the training process and to make it more effective by using the latest technology.



To develop high-level managerial abilities and moral values amongst the trainees.

Quality Policy

Delhi Metro Rail Academy is committed to harmonize and control training processes in order to enhance overall productivity, develop competence for various job profiles and to provide training keeping abreast with changes in technology and continuously improving training processes.



TEAM DMRA

The Academy has an excellent mix of in house faculty to impart quality and effective training. Experienced DMRC professionals having affinity for learning & teaching are selected as in house faculty. It is further augmented by guest faculty & industry experts to meet specific training needs as and when required.





TRAINING FOR HOLISTIC DEVELOPMENT

DMRC draws strength from its mission and corporate culture, which reads as under:-

“DMRC is a learning organization. We will strive to improve in whatever we do.”

The Academy is an ideal place for 360 degree development of the capabilities of metro employees. The capability is the function of Knowledge, Skill and Attitude. Training is the process of enhancing the knowledge and skills of employees for doing a particular job. Training processes also refine the attitude of employees which leads to quality performance of employees. At the time of recruitment, every organization matches the individual's knowledge [qualification] as per the requirement. These candidates are required to be given focussed attention towards the job they are likely to take up after completion of training.

TRAINING METHODS



The training process involves acquiring knowledge [K], skill [S] and development of right attitude [A] towards the job. The training modules for different job profiles are designed keeping in mind the need of the job. The training methods used in training to develop K, S & A are presented below:

Knowledge Based Training

As a part of Knowledge Based Training, the trainees undergo classroom training intervention through experienced and knowledgeable trainers. Experienced faculty members are assigned the task of imparting theoretical as well as hands-on training activities with emphasis on 'learning to perform' concept.

Class Room Training

The Academy has 25 class rooms with a capacity of 904 trainees at a time. All the class rooms are airconditioned to facilitate learning environment best suited for class room training.

All the class rooms are well equipped with most modern training aids which includes interactive display panels, ultra-short throw projectors, digital multimedia podiums, Lanterns, PA system, dedicated computer system, Wi-Fi/LAN, marker boards etc.

Method of teaching in class room is through Power Point presentations, audio- visuals & role play by the trainees & trainer.



Computer Based Training



Computer Based Training [CBT], in general sense, is a tutorial system of instructions conveyed through the use of a computer for the purpose of training. CBT is an interactive method of learning that provides a series of self-paced, web-based courses. CBT helps in imparting training, monitoring trainee progress, providing feedback and assessing final results. The Academy has well equipped CBT labs to impart Computer Based Training to the trainees on various topics such as Train Operations, Signalling, Rolling Stock and Electrical etc.

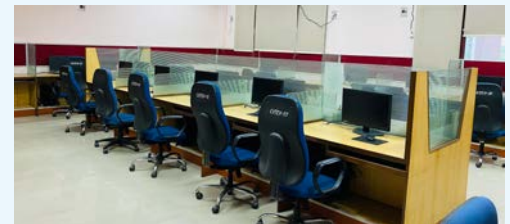
CBT: Train Operations

This CBT is basically designed for Train Operators and Station Controllers. This provides knowledge of different Rolling Stocks, Station Management, Operational Procedures and Disaster Management. This technique offers flexibility as well as helps learners to transact modules by themselves at their own pace.



CBT: S&T Systems

It consists of various Signalling, Telecommunication and AFC Systems and sub-systems. This CBT facilitates independent learning and helps enhance in-depth knowledge about working of equipment/systems installed in depots and main line premises.



CBT: Traction System

Traction CBT facilitates learning of Overhead Equipment and Power Supply Installations, their parts and tools, techniques for installation/removal of their parts through 3D simulation software and animated videos. Interactive learning of various maintenance activities on Overhead Equipment and Power Supply Installations are incorporated in the Traction CBT with audio in Hindi and English along with text descriptions.



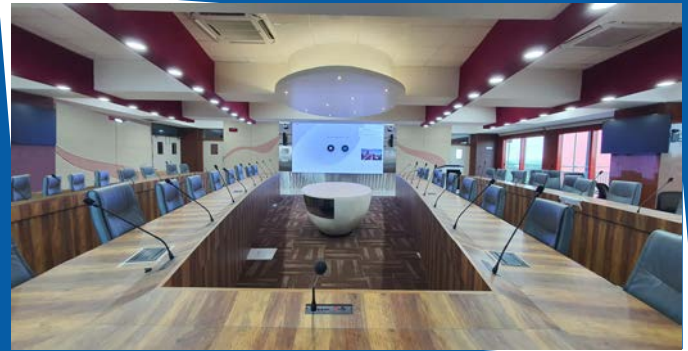


Computer Labs

The Academy has web enabled Computer Labs for management of training such as conducting online examinations, accessing training material and maintaining training data.

Tele-Presence Room

The Academy features state-of-art Tele-Presence Room which is equipped with large size LED Video Wall, Audio and Video Conference System, digital cameras with sound tracking feature, document visualiser, digital podium with integrated light and sound control etc. The room has a capacity of approx. 50 persons. The room is designed for conducting online and offline sessions simultaneously along with recording feature.



Skill Based Training

Certain jobs which are repetitive in nature like train driving & maintenance etc. need higher skills which can be acquired through practice with the system - actual or virtual. Simulation technologies are the most effective tools of training in the fields when it is prohibitively expensive or simply too dangerous to allow trainees to use real equipment in the real world. In such situations, through use of simulators, training can be imparted in a 'safe virtual environment' with 'real-life experience'. This eliminates the scope of committing mistakes during training and improves skills, which otherwise could cause harm, especially in a safety-critical environment. DMRC has provided simulators for most of its operative systems so that staff can be trained on the job in a virtual world without involving the actual system.



Simulators, Demonstration Rooms & Model Rooms

Simulation techniques are increasingly being used for training of rail road personnel, train operators, traffic controllers and engineers largely due to effective training, availability of real life simulations solutions and advent of highly advanced computer based graphical interfaces. These "virtual" simulations [where actual players use simulated systems in a synthetic environment] are found to be more appropriate for metro system. Simulators help to enhance skills for operating the train as well as for troubleshooting different faults. The Academy is equipped with following state of the art simulators, demonstration and model rooms.



Driving Simulators

The Academy has multiple state of art driving simulators, to train its Train Operators. Out of these, two are full scope simulators for Rotem (RS1) and Bombardier (RS2) trains while third is Motionless Simulator for Hyundai-Rotem (RS10) trains. Apart from these, there is an upcoming driving simulator being developed for Phase 4 trains.

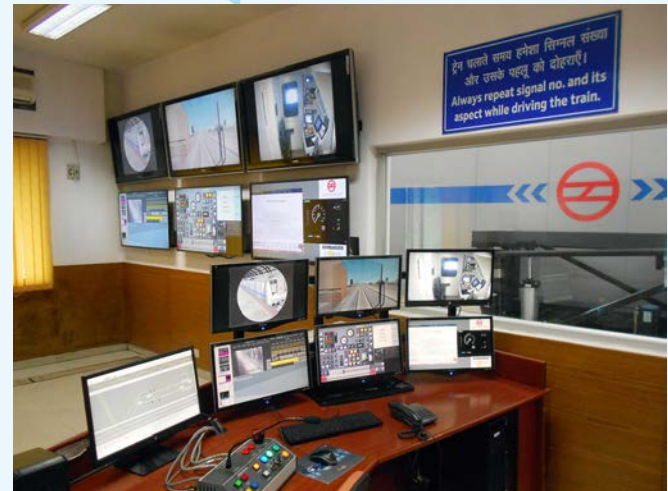


RS1 Driving Simulator

This simulator is for training of Train Operators on Rolling Stock-1(Rotem), This is a full scope simulator with six degrees of freedom of motion system.

RS2 Driving Simulator

This simulator is for training of Train Operators on Rolling Stock-2 (Bombardier). This is a full scope simulator with five degrees of freedom of motion system.



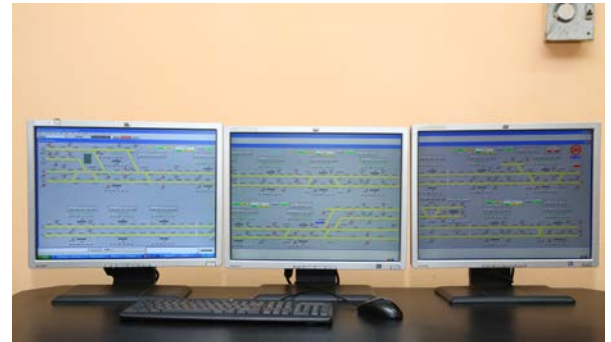
RS 10 Driving Simulator

This simulator is for training of Train Operators on Rolling Stock-10 (HRC). This is a Motionless Simulator. It has four Driving Workstations along with one Independent Driving Station to cover different real time scenarios.



ATS Simulator

Automatic Train Supervision [ATS] refers to a system within CATC (Continuous Automatic Train Control) system which monitors the system status and provides the appropriate controls to direct the operation of trains in order to maintain intended traffic patterns and minimize the effect of train delays on the operating schedule. The Academy has ATS simulators for hands on training for Traffic Controllers, Station Controllers, Depot Controllers & Signalling Staff who are responsible for operation and maintenance of train control system. At present, DMRA has five different ATS simulators for various Non-CBTC (Alstom, Siemens and Bombardier) and CBTC (Nippon and Bombardier) signalling systems.



Trouble Shooting & Maintenance Simulators (TSMS)



The Academy is equipped with state of art train sub-systems trouble shooting & maintenance simulators pertaining to the rolling stock for the training of maintenance staff and train operators. The trouble shooting & maintenance simulators have been provided with original hardware equipment which is operational and gives real-time feel as being provided in Delhi Metro trains. These simulators are very useful in providing practical training on sub-systems of trains such as passenger door, auxiliary converter system, traction control, air supply system, brake system, HVAC, TCMS, Bogie, Gangway, Couplers, Traction Motor & Drive gear, Vehicle Control Circuit (VCC), Pantograph etc.

Simulator of Unattended Train Operation (UTO) is also installed in DMRA premises which gives interface details of Signalling system and Rolling Stock thus enhancing knowledge of trainees for its actual functioning.



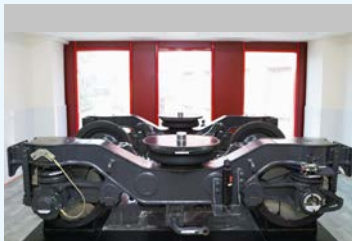
**TRACTION
CONVERTER TSMS**



DOOR TSMS



HVAC TSMS



BOGIE MSM



BRAKE SYSTEM TSMS



**VCC/TM & GD/
COMMUNICATION SYSTEM**



EMERGENCY DETRAINMENT DOOR

Demonstration Facilities



The Academy has set up demonstration rooms for various systems that are dedicated to Civil Engineering, Over Head Traction, Escalator, Elevator, ECS/TVS Model Room, Operations Demo Room, Signalling Demo Room, ROCS Model, 33 kV Circuit Breaker, Depot Yard Model, True Scale Tunnel Model etc. for imparting effective training by facilitating hands on practice/demonstration.

Civil Engineering Demonstration Room



Civil Engineering Demonstration Room provides real like experience with appreciable visualisation for various activities involved in the execution of Projects and Maintenance of Structures and Track. It enables familiarization with various kinds of components, equipment and material used at the project site as well as in the Works & P-way activities.

True Scale Tunnel Model

To provide actual tunnel experience to trainees, DMRA has developed true scale tunnel model in DMRA premises comprising actual installations of Walkway, ROCS, System cables, Cross Passage, PTM line, Fire line, Emergency lights, Ballastless Track with Station Platform. This facility has been created to eradicate night time training in actual tunnels during traffic block. Ring building assembly and extrados has been provided for real time understanding. The length of tunnel is 24.5 m with 5.8 m internal diameter.



Traction

The Over Head Equipment [OHE] provides traction power to the trains. Various OHE parts have been displayed in the Traction Demonstration Room to impart skill based training to OHE maintenance staff. Traction Demonstration Room is also equipped with touch screen based interactive tablets for CBT based knowledge of OHE equipment, their specifications, size, material used & warning board photographs.



Escalator

A full-scale operational escalator has been installed in the Academy to meet the training requirements wherein trainees can observe and understand working of different parts of the escalators at eye level.



Elevator



Three full scale operational elevators are available in the Academy which are used for practical exposure to the trainees about their components, functionality, maintenance, operation & rescue procedures. The parts of these elevators can be exposed and accessed for training purpose by opening their covers during day time which is otherwise not feasible at stations due to customer service constraints.

33 KV Air Insulated Circuit Breaker

A transparent 33 KV Circuit Breaker has been installed to facilitate training on Preventive/Corrective Maintenance by providing the following;

1. Physical view of all parts i.e. Bushings, Bus bar, Mechanical and Electrical parts etc.
2. Operating Mechanism i.e. Rack in, Rack Out, Electrical and Mechanical Operation, Spring Charging etc.
3. Maintenance practice of CB.
4. Training of control circuit troubleshooting.
5. Training to view tripping data [in the relay] and re-setting MTR etc.



OHE Yard

An eye-level OHE Yard Model of Flexible Overhead Equipment system has been set up to provide better understanding of Over Head Equipment [OHE] parts to the trainees. OHE Yard Model includes Cantilever Assembly, Stay and Bracket tube along with Insulators, Register Arm, Steady Arm, Section Insulator, Auto Tensioning Device and Masts, contact wire, Messenger wire, Return conductor, Overhead Protection Cable etc. OHE Yard Model is also useful in providing training on connecting discharge rod.

ROCS Model

An eye-level Rigid Overhead Catenary System (ROCS) model has been set up with the provision of Insulated Overlap, Un-insulated Overlap, Jumpers, Transition Element and various conductors.

ECS/TVS Model Room

A model of Environmental Control System/Tunnel Ventilation System has been set up for better understanding of trainees about air-conditioning and ventilation arrangement at underground stations in Delhi Metro. The model room houses a Tunnel Ventilation Model, an ECS Air Circuit Model and wall mounted ECS water circuit model.

Operations Demonstration Room

An operations demonstration room has been developed to showcase the station management concepts with better learning engagement by creating an integrated environment for theoretical & practical exposure through demonstrative techniques. It encompasses working of Station Control Room, Platform Supervisor Booth and Customer Care Centre amongst other things. It shall also minimise the need of trainees travelling to a metro station for the practical exposure.

S&T Demonstration Room

With an objective to make the training program more interactive and effective, S&T demonstration room has been developed at DMRA. The demonstration room houses actual field equipment, tools & measuring instruments, distinct system working models and their flow diagrams. The set up helps trainees to develop clear understanding of actual field scenario.



Attitude Based Training

Towards realization of its vision statement which reads as “Commuting experience in Delhi Metro to be customer's delight”, DMRA organizes various attitude based trainings to align thinking of DMRC staff with that of vision statement.

The following types of trainings are organized at DMRA for bringing changes in attitude of the employees.



Soft Skills Training

In today's customer oriented scenario, training and development of soft skills is as important as technical skills/hard skills. Realizing this very early in its days of formation, the Academy included soft skills in the training curriculum for its frontline staff. Soft skills training focuses on work ethics, positive attitude, body language, team spirit, team building and emotional intelligence which are essential for customer centric delivery of services.

Management Games & Case Studies

By means of management games, exercises, role plays and case studies, trainees are motivated to develop right attitude towards their nature of job.

Industry Visits

The industry visit includes visit to industries of prestige and repute available in the country to familiarise the employees with the best management practices.

Co- Curricular Activities

In congruence with technical knowledge and skills training, the Academy also focuses on encouraging trainees to embark on journey of holistic development. Morning assembly, Yoga & Meditation, Physical fitness, Workshops & Seminars, Library and other Co-curricular activities form parts of this exercise.

Morning Assembly

Since inception of the Academy, morning assembly is organized at 09:05 hours daily attended by all trainees and faculty. Morning Assembly facilitates a right kind of learning environment to provide value education and nurture culture of discipline amongst trainees. The assembly also provides a platform to share thoughts and communicate important messages.

Yoga, Meditation & Physical Fitness

Practicing Yoga improves balance, endurance, flexibility and strength, while meditation helps keep the mind sharp, relieves stress and anxiety.

Yoga Classes are held under guidance of expert Yoga Trainers as part of training curriculum.

The Academy also has a well equipped Gymnasium.

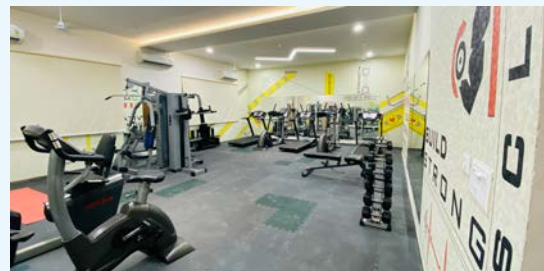
Morning
Assembly



Yoga
Session



Gymnasium



Yoga
Meditation Hall





Initial Training

New candidates who are selected through a recruitment process are given initial training. This training familiarizes them with the organizational mission, vision, knowledge of rules and regulations, job acumen so as to prepare them for their job.

In-Service Training

Refresher Training

The existing employees are trained to refresh and enhance their knowledge which keeps them abreast with latest updates in the technology, systems and processes.

Reshuffling Training

The organization emphasizes on multi skilling concept which requires staff reshuffling from one job to the other after a definite period of time. Reshuffling training is imparted to the existing employees who are to be assigned with different responsibilities.

Training on Promotion

This training is imparted to the promoted employees in order to prepare them to assume higher responsibilities.

Executive Development Programs

DMRA has comprehensive development program for executives comprising of following attributes:

- Leadership and management
- Foundation training
- System training
- Need based trainings such as Phase-II, Phase-III, Inter-departmental & Interface

Advanced Management Program (AMP)/ Management Development Program (MDP)

AMP/MDP focuses on holistic development of senior and middle level managers for enhancing their capabilities by giving suitable inputs in the form of

- Organizational effectiveness & efficiency
- Leadership and management
- Exposure to the best industries outside DMRC

Special Training

Customized Training is imparted to the trainees on special subjects/topics such as Mindfulness, Emotional Intelligence, Disaster Preparedness, First Aid, Customer Care, Sign Language Training, Communication Skills & Spoken English, Etiquettes & Attire, Accessibility and Sustainable Development Goals etc.

Advanced Training Programs

Being a torch bearer in Metro Operations in India, DMRC shares its expertise with other upcoming and existing metro systems in India and abroad. In this direction we are conducting the following special programs for the benefit of individuals/organizations.

MDP on Strategic & Project Management

- MDP on Rail Based Urban Transportation
- Advanced Training Program on Ballastless track
- Advanced Training Program on Signalling & Train control and Fare Collection System
- Advanced Training Programme on Tunnelling, Concrete Technology & Pile Foundation

D-LITE (Doing Lasting Improvement in Travel Experience)

In line with the Vision of DMRC, the Academy has developed a training program to launch a D-LITE campaign. The objective of the D-LITE campaign is to take the level of service beyond expectations of the customers. The objective of the training is to emphasize the role and responsibilities of the frontline staff and to get them effectively involved in successful implementation of D-LITE campaign.

Customized Training

DMRA regularly designs and conducts customized training programs in the field of Mass Rapid Transport System, Project Planning and implementation as well as its Operations & Maintenance.

Training to Other Organizations

The Academy has been a pioneer in the field of training on Metro rail systems in India. We have distinction of training not only DMRC employees but also employees from other Indian & overseas metro systems and non-metro organizations.

Our international clients include-

- MRT Jakarta, Indonesia
- Dhaka Metro Rail, Bangladesh.
- Sri-Lankan LRT

Our Indian clients include-

A) Metros

- Bangalore Metro Rail Corporation Ltd.
- Chennai Metro Rail Ltd.

- DB RRTS Operations India Pvt. Ltd.
- Jaipur Metro Rail Corporation Ltd.
- Kolkata Metro Rail Corporation Ltd.
- Mumbai Metro One Pvt. Ltd. (MMOPL)
- Mumbai Metro Rail Corporation Ltd. (MMRCL)
- Maharashtra Metro Rail Corporation Ltd. (Nagpur)
- Maha Mumbai Metro Operation Corporation Ltd.
- National Capital Region Transport Corporation (NCRTC)
- Noida Metro Rail Corporation Ltd. (NMRC)
- Uttar Pradesh Metro Rail Corporation Ltd. (Lucknow)

B) Other organizations

Our clients from non-metro organizations include

- Centre for Railway Information Systems (CRIS)
- CIDCO Ltd.
- Cyient Ltd. (formerly Infotech)
- Dedicated Freight Corridor Corporation of India Ltd.
- Deloitte Touche Tohmatsu India Pvt. Ltd.
- Delhi Integrated Multi-Modal Transit System Ltd. (DIMTS)
- Egis India Consulting Engineers Pvt. Ltd.
- Envion Enterprise Solution
- GERB Vibration Control Systems Pvt. Ltd.
- Ghaziabad Development Authority
- Gujrat Urban Development Company Ltd.
- Indian Green Building Council
- Indian Railway Institute of Civil Engineering
- Infrastructure Leasing & Financial Services Limited (IL&FS)
- IRCON International Ltd.
- Kalindee - VNC JV
- L&T

Support & Resources



Library

A library is an important part of any training set up. It is a source of knowledge to the trainees. It helps in developing reading habit amongst the trainees. For intellectual development, the Academy has setup state of art ultra modern library. The library houses Kiosks and RFID based Library Management System for efficient management of books and records. At present, there are about 6000 books, 1000 journals and manuals in the library with 3000 library members.

Auditorium

A fully airconditioned auditorium of 100 persons seating capacity equipped with state of the art Ultra Short Throw Projectors with ceramic display board, digital multimedia podium with integrated sound and light management system is provided to conduct important events.



Care & Comfort



Hostel & Guest House

The Academy has a hostel facility in the near vicinity comprising of 112 twin sharing rooms for male trainees along with guesthouse with AC suites and rooms. For female trainees a separate hostel with a capacity to accommodate 50 trainees is provided in the staff quarters premises. The hostel also has a provision of mess and recreational facilities.

Canteen

An airconditioned canteen having a pleasant ambience and appealing furniture with a seating capacity for 200 persons is attached to the Academy that serves healthy, hygienic and nourishing food.





“TESTIMONIALS,”

It was a good experience to visit the training institute.

Manoj Sinha
Minister of State Railways

It is always an exhilarating experience to visit any official workshop of DMRC. A world class facility that India is proud of

Najeeb Jung
LG of Delhi

Visited the training center and experienced the simulator. Its very exciting way of teaching and training. Staff is very motivated for training and making DMRC a best organisation. Wish all the very best to the organisation

Ranjit Singh Deol,
MD MMRC

I, along with senior management of Rapid Metro Rail Gurgaon made a visit to Delhi Metro Training Institute on 17 Oct 2012. On behalf of our team, I congratulate DMRC and the entire faculty for making and professionally running such a beautiful facility.

Parveen Kumar,
Director O&M /RMGL

DMRC being pioneer in India for Metro Rail construction and operation, it is expected that their experience and consultancy be available for other aspiring cities like Surat.

Jagdish L Thadani
Surat Municipal Corporation



Ghansham Bansal
Dean



S K Yadav
Sr. Professor (Civil)
s.k.yadav@dmrc.org



Rajesh Agrawal
Professor (Electrical)
rajeshagrawal@dmrc.org



Mukesh Kumar
Professor (RS-I)
mukeshdmrc@gmail.com



Hemant Kumar Meena
Professor (RS-II)
hemant_2452@dmrc.org



Pankaj Saxena
Professor (S&T-I)
pankaj.saxena@dmrc.org



Anil Patel
Professor (Civil)
anil_2595@dmrc.org



Ritesh Gupta
Professor (Operations)
ritesh_2450@dmrc.org



Mahender Singh
Principal
principal@dmrc.org



Delhi Metro Rail Academy

Train Depot, Shastri Park, East Approach Road, Delhi-110053

Tele/Fax: 011-22180898 | <https://dmra.delhimetrorail.com/>

Design & Print by GENESIS | 9810033682 | genesiadvt@hotmail.com