

पर्यवेक्षक प्रशिक्षण केन्द्र,
उत्तर रेलवे, लखनऊ

SUPERVISORS TRAINING CENTRE
NORTHERN RAILWAY, LUCKNOW



वार्षिक प्रशिक्षण कैलेंडर
ANNUAL TRAINING CALENDAR
2023-2024

OUR TEAM MEMBERS

| S. No. | Name | Designation | Contact No. |
|--------|--------------------------|------------------------------|-------------|
| 1. | Sh. Neeraj Srivastava | Director | ----- |
| 2. | Vacant | AME Training | ----- |
| 3. | Sh. Avadhesh Kumar | Sr. Lecturer (I/c)/Mech. | 8400334043 |
| 4. | Sh. Prateek Srivastava | Sr. Lecturer /Mech. | 8400334099 |
| 5. | Sh. Naveen Chand Jaiswal | Sr. Lecturer /Mech. | 8400334041 |
| 6. | Vacant | Lecturer/Mech. | ----- |
| 7. | Vacant | Lecturer/Mech. | ----- |
| 8. | Sh. U S Dwivedi | Chief Instructor (I/c)/Mech. | 8400334098 |
| 9. | Sh. Pushpak Ranjan | Chief Instructor /Mech. | 9650409949 |
| 10. | Sh. Abhishek Shukla | Chief Instructor/Mech. | 9450344468 |
| 11. | Sh. Dipesh Kumar | Chief Instructor /Mech. | 9794830433 |
| 12. | Sh. Alok Dixit | Sr. Instructor (I/c)/WTC | 8400334042 |
| 13. | Sh. Manvendra Singh | Chief Instructor | 8400334041 |
| 14. | Sh. Vikas Srivastava | Chief Instructor | 9794843325 |
| 15. | Sh. Rajan Malik | Instructor | 7880969069 |
| 16. | Sh. Vikas Sharma | Instructor | 9651163109 |
| 17. | Sh. Prabhu Dayal | PS | 8287518494 |
| 18. | Sh. Ranjeet Singh | Ch. Office Superintendent | 6393820715 |
| 19. | Sh. Shubham Mishra | Ch. Office Superintendent | 7754866644 |
| 20. | Sh. Vikas Meena | CMA | 7014275021 |

List of Holidays-2023

| S. No. | Name of Holiday | Date | Day |
|--------|-------------------------------|------------|-----------|
| 1. | Republic Day | 26-01-2023 | Thursday |
| 2. | Mahashivratri | 18-02-2023 | Saturday |
| 3. | Holi | 08-03-2023 | Wednesday |
| 4. | Id-ul-Fiter | 22-04-2023 | Saturday |
| 5. | Budh Purnima | 05-05-2023 | Friday |
| 6. | Bakrid | 29-06-2023 | Thursday |
| 7. | Muharram | 29-07-2023 | Saturday |
| 8. | Independence Day | 15-08-2023 | Tuesday |
| 9. | Raksha Bandan | 30-08-2023 | Wednesday |
| 10. | Janamashtami | 06-09-2023 | Wednesday |
| 11. | Mahatma Gandhi's Birthday | 02-10-2023 | Monday |
| 12. | Vijayadashami 'Dussehra' | 23-10-2023 | Monday |
| 13. | Deepawali/Govardhan puja | 13-11-2023 | Monday |
| 14. | Chhat Puja | 20-11-2023 | Monday |
| 15. | Sh. Guru Nanak dev's Birthday | 27-11-2023 | Monday |
| 16. | Christmas Day | 25-12-2023 | Monday |

SUPERVISORS TRAINING CENTRE, LUCKNOW

With green surroundings, the STC building is Platinum rated Green Building certified by Indian Green Building Council of CII. The campus has excellent Infrastructural Facilities, Modern Laboratories equipped with Audio-visual Training content, Trainers, Simulators, Cut-sections, Models, Self-learning Stations and more. The campus is WiFi enabled with Air-conditioned modern classrooms, CCTV monitoring, Interactive WhiteBoards, Digital Visualizers etc.

HOSTEL & MESS

The Apprentice Engineers Hostel has more than 100 rooms with a total bed capacity of 170 beds. The dining hall has a seating capacity for serving 120 meals at a time. The mess is run by the trainees on self-financing and self-managed basis. The hostel has a common recreation hall with cable TV, indoor gymnasium, open badminton and volleyball courts.

STC LIBRARY (e-Granthalaya)

The STC library is well stocked with than 2235 books on various subjects such as Engineering, Management, Information Technology, Welding Technology and Yoga. Various Hand books, Codes, Maintenance manuals, Accident manuals etc. are also available for reference. Newspapers in Hindi and English are also available. The library uses the e-Granthalaya cloud software developed by NIC for library management.

EXTRA CURRICULAR ACTIVITIES

The faculty at STC guides the trainees for taking part in Extra-Curricular activities like Nukad-Nataks, Debate competitions, Essay writing, Poster making, Swachta Shramdaan etc. This is considered essential for overall personality development of the trainees.

GREEN INITIATIVES

STC has a tertiary-level Sewage Treatment Plant, Rain water harvesting plant, Artworks developed from Scrap, Solar Energy panels, comfortable classrooms etc. These are some of the Green initiatives taken by STC with an environmentally sustainable growth objective. These initiatives also serve the demonstration purpose for motivating & grooming the trainees towards adopting green initiatives in their own workplaces.

AIR CONDITION LAB

Air Condition Lab is helpful for understanding the complete refrigeration cycle and technologies used. This lab has Refrigeration Cycle trainer, Gas charging Trainer, basic Air-Conditioning trainer, Small Components (*Compressors etc*), Models Learning Station and RMPU Trainer with ICF & LHB Control Panels.

C&W LAB

C&W Lab is well equipped with learning stations related to C&W components and their working. The Lab has Air Brake System simulator to demonstrate working of DV and various Air Brake System Components. Various components and cut models of ICF, LHB and Wagon are available in this Lab. Audio-Visual content as short video clips is also available and help in better grasp of the subject matter.

COMPUTER LAB

For the training on MS WORD, EXCEL, POWER POINT and INTERNET for Northern Railway Supervisors and Technicians, a well-equipped COMPUTER LAB with Latest Desktop Computers, Wi-Fi connection with Internet facility and printing is also available.

DIESEL ENGINE LAB

The Diesel Engine Lab has been upgraded for training on various systems of ALCO and EMD locomotives. There are trainers and learning stations for Fuel oil system, Lube oil system, Water Cooling system, Braking system, Electrical system, DEMU etc. A wide range of Audio-Visual content is available for better grasp of subject matter by the trainees. This lab also houses the 3D Printing and Modelling workstation.

ELECTRICAL LAB

The Electrical Lab is equipped with Wiring Diagram Trainer of 2nd AC ICF and LHB coaches. There are electrical Meters and gauges, IV couplers ICF & LHB, WRA and other components for demonstration.

WELDING LAB (Centre for Excellence)

This is a Centre for Excellence Lab at STC and is equipped with Virtual Reality based Welding Simulator from Fronius. The lab has advanced learning aids like Interactive Learning Board, Training Stations, AC & DC, IGBT based welding plants, MIG/CO₂ welding plant, Plasma, LPG, Oxy-Acetylene cutting plants, Fume Extractor system.

WSP LAB (Centre for Excellence)

This is a Centre for Excellence Lab at STC and is furnished with a working hardware simulator for Wheel Slide Protection system used in LHB Coaches of Indian Railways. The simulator has a full FIAT bogie with working connections of bogie brake system and its interaction with WSP system. Audio-visual content is also available for better grasp of subject material.

AUTOMATION LAB

The Automation Lab is the latest addition of high-end labs in STC and has training facilities with live working components, sensors, PLC etc for training in Mechatronics and Automation. The training range covers basic circuits and components to Embedded systems and Robotics.



Smart Class Rooms



STC Library (e-Granthalaya)

Air Conditioning Lab



Computer Lab

Automation Lab



Diesel Engine Lab



C&W Model Park



Electrical Lab



Welding Lab



WSP Lab

TRAINING CALENDAR OF SUPERVISORS TRAINING CENTRE, NORTHERN RAILWAY, LUCKNOW

| COURSES FOR YEAR: 2023-2024 (April-2023 to March-2024) | | | | | | | | | | | | | |
|---|---|---------------------------------------|---------------------------------------|---------------------------------------|--------------------------------------|---------------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|--------------------------------------|---------------------------------------|--------------------------------------|
| S No. | | Apr-23 | May-23 | Jun-23 | Jul-23 | Aug-23 | Sep-23 | Oct-23 | Nov-23 | Dec-23 | Jan-24 | Feb-24 | Mar-24 |
| A. REGULAR COURSES (Induction & Promotional Course) | | | | | | | | | | | | | |
| 1 | Induction Course for ASE & AJE (52 weeks) | *03 rd to 07 th | ----- | *05 th to 09 th | ----- | *07 th to 11 th | ----- | *03 rd to 07 th | ----- | *04 th to 08 th | ----- | *19 th to 23 rd | ----- |
| 2 | Promotional Course for IJE (52 weeks) | ----- | *15 th to 19 th | ----- | ----- | *21 st to 25 th | ----- | ----- | *21 st to 25 th | ----- | ----- | *12 th to 16 th | ----- |
| 3 | Promotional Course for RJE (13 weeks) | *10 th to 14 th | ----- | *05 th to 09 th | ----- | *07 th to 11 th | ----- | *09 th to 13 th | ----- | *11 th to 15 th | ----- | *05 th to 09 th | ----- |
| *These are Course Registration dates. The Classes will begin after Course Registration. Note: Registrations will NOT be done in mid-session or on other dates. | | | | | | | | | | | | | |
| B. REFRESHER COURSE | | | | | | | | | | | | | |
| 1 | Refresher course for SSEs & JEs (Mechanical) | 10 th to 29 th | 08 th to 27 th | 05 th to 24 th | 03 rd to 22 nd | 07 th to 26 th | 04 th to 23 rd | 24 th to 11 th | 04 th to 23 rd | 08 th to 27 th | 05 th to 24 th | 04 th to 23 rd | |
| C. SPECIAL COURSES | | | | | | | | | | | | | |
| 1 | NDT Course for Mech. and C&M Supervisors | 26 th to 28 th | ----- | ----- | 24 th to 26 th | ----- | ----- | 09 th to 11 th | ----- | ----- | 08 th to 10 th | ----- | ----- |
| 2 | Introduction to Electronics, Automation & Control System | 04 th to 07 th | ----- | 05 th to 08 th | ----- | 01 st to 04 th | ----- | 03 rd to 06 th | ----- | 11 th to 14 th | ----- | 05 th to 08 th | ----- |
| 3 | Introduction to Train Sets | ----- | 01 st to 04 th | ----- | 24 th to 27 th | ----- | 11 th to 14 th | ----- | 01 st to 04 th | ----- | 02 nd to 05 th | ----- | 11 th to 14 th |
| 4 | Introduction to 3D Modeling & 3D Printing | ----- | 10 th to 12 th | ----- | ----- | 16 th to 18 th | ----- | ----- | 22 nd to 24 th | ----- | ----- | 19 th to 21 st | ----- |
| 5 | Excellence in Welding for Supervisors | ----- | 15 th to 17 th | ----- | ----- | 09 th to 11 th | ----- | ----- | 15 th to 17 th | ----- | ----- | 12 th to 14 th | ----- |
| 7 | Refresher course in HHP (GM) Loco & DEMU maintenance | ----- | ----- | 06 th to 08 th | ----- | ----- | ----- | ----- | ----- | 20 th to 22 nd | ----- | ----- | ----- |
| 8 | Short Course on Management of Linen, OBHS, CTS, Pest Control, Stores, & Safety at workplace for mech. supervisors | ----- | 10 th to 12 th | ----- | 26 th to 28 th | ----- | ----- | 18 th to 20 th | ----- | 13 th to 15 th | ----- | 14 th to 16 th | ----- |
| 9 | LHB Coach Maintenance | 24 th to 28 th | ----- | 12 th to 16 th | ----- | 01 st to 05 th | ----- | 09 th to 13 th | ----- | 11 th to 15 th | ----- | 12 th to 16 th | ----- |
| 10 | Short Course on IMWB, WILD, HAHW & OMRS | 03 rd to 05 th | ----- | 01 st to 03 rd | ----- | ----- | 27 th to 29 th | ----- | 28 th to 30 th | ----- | 29 th to 31 st | ----- | 27 th to 29 th |
| 11 | Railway Couplers –Design, Maintenance and Defects | 27 th to 28 th | ----- | ----- | 10 th to 11 th | ----- | ----- | 05 th to 06 th | ----- | ----- | 23 th to 24 th | ----- | ----- |
| 12 | Design, Maintenance, Trouble-shooting: Air Brake, Air-Dryers, PEASD, WSP & FIBA in Locos/Coaches/DEMUs/Wagons | ----- | 22 nd to 25 th | ----- | 17 th to 20 th | ----- | 18 th to 21 st | ----- | 07 th to 10 th | ----- | 16 th to 19 th | ----- | 19 th to 22 nd |
| 13 | Bio-toilets – Design, Maintenance and, Trouble-shooting | ----- | ----- | 01 st to 02 nd | ----- | ----- | 01 st to 02 nd | ----- | ----- | 28 th to 29 th | ----- | ----- | 01 st to 02 nd |
| 14 | Disaster Management & Accident Investigation | 10 th to 12 th | ----- | 01 st to 03 rd | ----- | 21 st to 23 rd | ----- | 16 th to 18 th | ----- | 18 th to 20 th | ----- | 26 th to 28 th | ----- |
| 15 | Train Examination Pattern (for coaching & wagons)– Practices, Infrastructure & New Developments | ----- | 02 nd to 03 rd | ----- | ----- | 02 nd to 03 rd | ----- | ----- | 23 rd to 24 th | ----- | ----- | 27 th to 29 th | ----- |
| D. WTC COURSES | | | | | | | | | | | | | |
| 1 | Virtual Reality Simulator based training for Welders | 03 rd to 07 th | 01 st to 06 th | 05 th to 09 th | 03 rd to 07 th | 07 th to 11 th | 04 th to 09 th | 03 rd to 07 th | 06 th to 10 th | 04 th to 09 th | 01 st to 05 th | 05 th to 09 th | 04 th to 08 th |
| 2 | Refresher Course for Artisans | 10 th to 22 nd | 15 th to 27 th | 05 th to 17 th | 10 th to 22 nd | 07 th to 19 th | 18 th to 30 th | 09 th to 21 st | 06 th to 18 th | 11 th to 23 rd | 08 th to 20 th | 12 th to 24 th | 11 th to 23 rd |
| 3 | Special Course on MIG/MAG Welding & Air Plasma Cutting | 24 th to 26 th | 29 th to 31 st | 26 th to 28 th | 24 th to 26 th | 01 st to 03 rd | 25 th to 27 th | 23 rd to 25 th | 01 st to 03 rd | 26 th to 28 th | 29 th to 31 st | 26 th to 28 th | 25 th to 27 th |
| 4 | RKVY Training for Welders** | 10 th to 29 th | 08 th to 27 th | 12 th to 01 th | 10 th to 31 st | 14 th to 05 th | 11 th to 30 th | 09 th to 30 th | 14 th to 05 th | 11 th to 01 st | 08 th to 29 th | 12 th to 02 nd | 11 th to 30 th |
| 5 | RKVY Training for Electricians** | 10 th to 29 th | 08 th to 27 th | 12 th to 01 th | 10 th to 31 st | 14 th to 05 th | 11 th to 30 th | 09 th to 30 th | 14 th to 05 th | 11 th to 01 st | 08 th to 29 th | 12 th to 02 nd | 11 th to 30 th |
| **These courses are for Non-Railway Trainees. | | | | | | | | | | | | | |



Heritage Gallery



Hostel Mess (Dining Hall)



Roof Top Solar System



Modern Gymnasium

COURSE CONTENT HIGHLIGHT

Refresher Course for SSEs & JEs (Mechanical): (Coordinator – Sh. Abhishek Shukla)

- Policy circulars/ guidelines issued by CAMTECH, RDSO, Railway Board etc.
- Design developments, Maintenance, Troubleshooting for Rolling Stock and Workshops.
- Motivation, Stress Management, Personality Development.
- Safety, Labour laws, Factory Act, Pollution Control laws etc.
- Field visits to Production Units / Major depots.
- Material Management, Tenders and Contracts, Technical English, Office Communications etc.
- Establishment Rules, D&AR, Rajbhasha.
- C&M Lab procedures, Elementary Electronics, Welding processes, Accident Investigations etc.

NDT Course for Mech and C&M Supervisors: (Coordinator – Sh. Vikas Meena)

- Introduction to Destructive & Non-Destructive Testing.
- Dye penetration test of Rolling stock items.
- Zyglot testing, Magnetic particle testing of various components of Rolling Stock.
- Ultrasonic testing of Axle and other items of Rolling Stock.
- Radiographic testing (X-ray, Gamma-ray, etc.)

Introduction to Electronics, Automation & Control System: (Coordinator – Sh. Manvendra Singh)

- Introduction to Mechatronics and its applications – system automation, remote monitoring and analysis.
- Introduction to PLC, Embedded Systems, Microprocessor and integrated circuits.
- Boolean algebra, Logic gates, Gate design.
- Hands on Microprocessor programming.
- Practical sessions for circuit building- Electrical and Hydraulic trainers.

Introduction to Train Sets: (Coordinator – Sh. Dipesh Kumar)

- Introduction to Train-Set – Design, Features, Major Sub-systems, Maintenance Instructions.
- Train-18 bogie and comparison with LHB FIAT bogie. Major components and Maintenance.
- AC-DC-AC power transmission system, Major sub-assemblies / components and Maintenance.
- Overview of PIPAS, Door Control, Vacuum Bio-toilets, Braking System, Water supply, HVAC, Furnishings, Train Control & Monitoring System etc.
- EP, ED, Blended braking, major components, maintenance, defects and troubleshooting practices.
- Important Infrastructure, Materials, M&P required.

Introduction to 3D Modeling & 3D Printing: (Coordinator – Sh. Prateek Srivastava)

- Introduction to 3D Modelling – Modelling tools, co-ordinate system and modelling Operations.
- Engineering Drawing & CAD Drawings.
- Hands on training on 3D modelling software – Unigraphics NX.
- Hands on training on 3D printing software.
- Rapid prototyping using 3D modelling and Printing.

Excellence in Welding for Supervisors: (Coordinator – Sh. U. S. Dwivedi)

- Introduction to welding process- types and uses new technological developments.
- Welding terminology and Welding process used for Rolling Stock manufacture and maintenance.
- Heat effect-welding process, machine and electrode selection.
- MMAW, CO₂, TIG/MIG welding, Oxy-acetylene, LPG and Air Plasma cutting.
- Types of welding machines, current and voltage selection and their effects, grounding and other precautions, welding defects-identification and prevention.
- Welding Environment, welding skill for quality weld, rating.

Refresher for HHP (GM) Loco & DEMU: (Coordinator – Sh. Avadhesh Kumar)

- GM Locomotive and DEMUs- Features and General Maintenance.
- Lube Oil system, Fuel Oil system, Water Cooling system- working principle, design, maintenance and troubleshooting.
- Microprocessor Control System, power transmission system- working principle, design, maintenance and troubleshooting.
- Rotating machines, Computer controlled brake system- working principle, design, maintenance and troubleshooting.
- Latest instruction from RDSO and DLW, modifications, field performance etc

Short Course on Management of Linen, OBHS, CTS, Pest Control, Stores, & Safety at workplace for mech. supervisors: (Coordinator– Sh. Naveen Chand Jaiswal)

- Details and working of mechanized laundries.
- Guidelines for inspection of laundry.
- Linen holding and train services.
- Guidelines for condemnation of Linen.
- Details and guidelines for CTS and OBHS services.
- Soft skills for OBHS staff, tools and cleaning agents etc.
- Pest & Rodent control chemicals/agents.
- Feedback formats used in OBHS.
- Analysis to reduce passengers complains
- Duties of C&W Supervisor regarding CTS, OBHS, Linen, Pest Control, Material Stores and Workplace Safety.
- PPEs and Safety conditions for worker safety and related rules.
- Online tendering through IREPS, Procurement of Stock and Non-Stock items through iMMS.
- Framing of tender conditions, material specifications, other conditions, warranty claims etc.

LHB Coach Maintenance :(Coordinator – Sh. Pushpak Ranjan)

- Introduction to LHB, Comparison with ICF coaches.
- Design Features of FIAT bogie, LHB Shell, Interiors, Materials, Force transmission, Safety Features etc.
- Major sub-assemblies and Components, Modifications.
- Maintenance Schedules and Locations (Depot/Workshop), Activities, Infrastructure, T&P, M&P required,
- Material requirement must change items, common defects, identification of defects, Troubleshooting etc.
- Smart Coach Features and Utility.

Short Course on IMWB, WILD, HAHW & OMRS: (Coordinator– Sh. Abhishek Shukla)

- Concept and Working Principles of IMWB, WILD, OMRS, HAHW etc.
- Utility, Benefits, Status on Indian Railways.
- Alerts / Reports generated, JPO/Protocols for action.
- Infrastructure requirement, site selection and installation.
- Maintenance, Calibration, Troubleshooting.

Railway Couplers –Design, Maintenance and Defects: (Coordinator – Sh. Dipesh Kumar)

- Types of Couplers, locking / unlocking procedures.
- Components and constructions details of IR rolling stock couplers
- Coupler Defects, Maintenance Guidelines, Use of Gauges.
- Instructions and Precautions to avoid accidental uncoupling.
- Causes and prevention of train parting.

Design, Maintenance, Trouble-shooting of Air Brake, Air-Dryers, PEASD, WSP & FIBA in Locos/Coaches/DEMUs/Wagons: (Coordinator – Sh. Pushpak Ranjan)

- Various types of Air-brake system.
- Working Principle of the Distributor Valve, Brake Cylinder, ACP, FIBA & WSP System with maintenance practice.
- Maintenance and Trouble shootings, investigation of airbrake system/component failure cases, case studies and decoding of various defect Codes for Fault Diagnosis of WSP system.
- Demonstration of various component of WSP system

Bio-toilets – Design, Maintenance, Trouble-shooting: (Coordinator – Sh. U.S. Dwivedi)

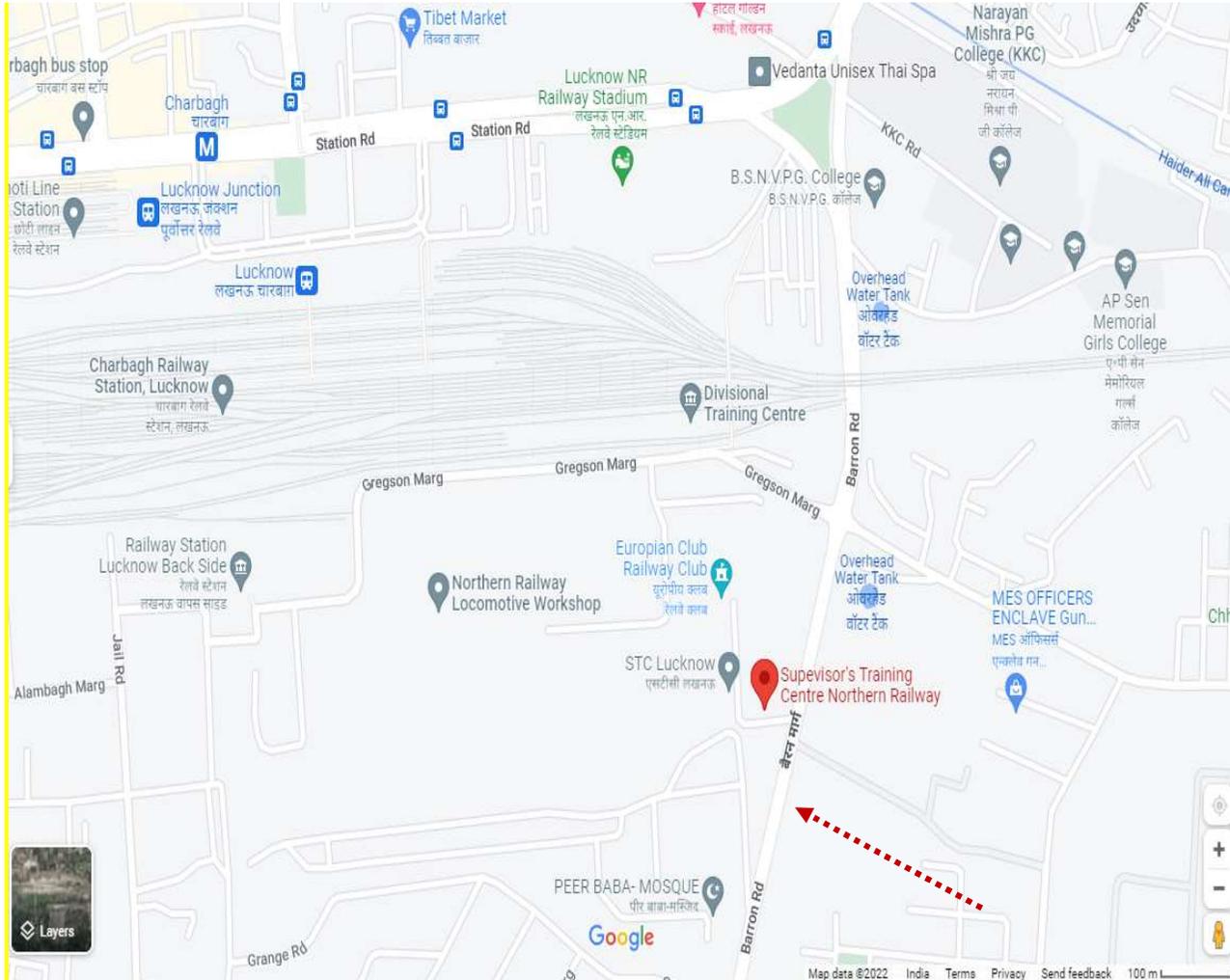
- Evolution of Bio-Toilet in IR- need and Role of CAMTECH & DRDO.
- Designs, Working Principle and Maintenance Procedures.
- Laboratory test, Common Defects, Precautions and Trouble shooting.
- Bio-Vacuum Toilets.

Disaster Management and Accident Investigation: (Coordinator – Sh. Dipesh Kumar)

- Introduction to Railway accidents, types, causes, statistics and Disaster Management
- ART, SPART, ARME, 140T cranes – Design, Equipment, Maintenance, Operating Procedure, Inspection etc. and Field visit.
- Detailed study of accident causes, how to Identify and Establish, Case studies, Accident manual, Track measurements and maintenance practices, recording of dimensions etc.
- Role of Supervisor and Railway Personnel at Accident site
- Management of Accident site, Measurements at Accident site and observations, preservation of clues, records, Preliminary Investigation and reporting at accident sites.
- Report preparation and further actions

Train Examination Pattern (for coaching & wagons) - Practices, Infrastructure and New Developments: (Coordinator – Sh. Abhishek Shukla)

- Train Examination patterns for Coaching and Freight examination with policy circulars revised RPC-IV.
- Various freight train examinations -End to End, Premium, CC. Validity & Revalidation of BPC.
- Infrastructure and Material requirement in Pitlines, Sicklines, Yards and Depots.
- Smart Yard, Automated Inspection Systems, Coach Washing Plant, Lighting, Camtech Pitline etc.
- Maintenance practices and Record Keeping during maintenance.



Contact:

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