TRAINING CALENDAR

2006-2007

NATIONAL INSTITUTE FOR TRAINING OF HIGHWAY ENGINEERS

(Ministry of Shipping, Road Transport and Highways, Govt. of India)

A-5, Institutional Area, Sector-62, NH-24 Bypass, NOIDA-201301 (UP)

Tel/Fax : 0120-2400085, 2400086, 2251887 (95120 from Delhi)

Email : nithe@bol.net.in, website : www.nithe.org

Contents

INTRODUCTION OF THE INSTITUTE

National Institute for Training of Highway Engineers (NITHE) is a registered Society under the administrative control of Ministry of Shipping, Road Transport & Highways (M/o SRT&H), Govt. of India. Hon'ble Minister-in-Charge is the President and the Secretary, Road Transport & Highways is the Vice-President of this Society, which is advised by the Governing Body comprising of eminent and distinguished engineers and administrators of the country. The Director General (Road Development) & Special Secretary, Department of Road Transport and Highways is the Chairman of this Body. It is a collaborative body of the Central and State Governments, set up in the year 1983 with the primary objective to fill the long standing need for training of highway engineers in the country both at the entry level and during the service. NITHE does not charge any course fee from the engineers nominated by the M/o SRT&H and State PWDs participating in its regular training programmes.

An apex institution of excellence, NITHE, has trained **11,931** highway and bridge engineers from India and Abroad through its **523** training programmes organised at Regional, National and International levels (upto 31.08.2006). Participants are drawn from Ministry of Shipping, Road Transport & Highways, various State Public Works Departments, Rural Engineering organisations, Border Roads, Public & Private Sector organisations involved in the field of highway engineering. Besides Engineers from India.

NITHE has also conducted a number of training courses for foreign Government Departments through its International, SAARC & TCS Colombo Plan, programmes. NITHE has the expertise to organise training programmes outside India and a few such programmes in Canada, UK, Australia, Bhutan, Ghana, Malawi, Nepal and Thailand were widely appreciated. The Institute's effective training strategy attracted foreign engineers to participate in its training programmes and it has organised 38 training programmes in and outside India to provide training to 448 engineers from twenty one countries.

NITHE is operating from a sprawling campus spread over an area of 10 acres. The campus comprises a centrally air-conditioned auditorium, with capacity for 250 persons, conference & seminar halls each having a capacity for 80 persons, lecture halls with 30 persons capacity each supported by a spacious library, computer centre, 90 bedded air-conditioned trainees hostel with dining & recreational facilities. It is located in the Institutional Area, NOIDA on the NH-24 (Ghaziabad bypass), about 25 km away from centre of Delhi (Connaught Place).

NATIONAL INSTITUTE FOR TRAINING OF HIGHWAY ENGINEERS

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Tel: 0120-2400085, 2400086, Fax : 2400087 (95120 from Delhi), Email : nithe@bol.net.in

NOMINATION FORM

S.No. and Name of Training Programme as per Training Calendar _____

_____ **from** _____ **to** _____ **at** _____

TO BE FILLED IN BY THE NOMINEE

Name _____

Sex (Male/Female) _____ **Age** (Years) _____ **Date of Birth** _____

Designation _____

Organisation _____

Address for communication _____

_____ **PIN** _____

Phone with STD codes (O) _____ (R) _____ (M) _____

Fax _____ **Email** _____ **Website** _____

Brief Details of Experience _____

_____

Expectation from the course _____

_____

Hostel Accommodation Needed (Yes / No) _____
(Rs.150/day towards lodging & boarding for the participants of Ministry & State PWDs)

(Signature of the candidate)

TO BE FILLED IN BY THE NOMINATING AUTHORITY

Name of concerned officer of nominating authority _____

Designation _____ **Organisation/Department** _____

Address for communication _____

_____ **PIN** _____

Phone with STD codes (O) _____ (R) _____ (M) _____

Fax _____ **Email** _____ **Website** _____

Demand Draft No.* (where applicable) _____ **Dated** _____ **for Rs.** _____ (course fee as per training calendar) drawn in favour of "**National Institute for Training of Highway Engineers**" is enclosed.

(Signature of the sponsor with office stamp)

***However, no course fee is chargeable from the Engineers nominated by the Ministry of Shipping, Road Transport and Highways and State Public Works Departments / Union Territories.**

Address for Communication

1. **Shri V L Patankar** **Director**

National Institute for Training of Highway Engineers (NITHE)
A-5, Institutional Area, Sector-62
NH-24 Bypass, NOIDA-201301 (UP)
Tel : 0120-2400085, 2400086, Fax : 2400087
E-Mail : nithe@bol.net.in, Website : www.nithe.org

2. **Shri Dinesh Sharma** **Deputy Director & Course Co-ordinator**

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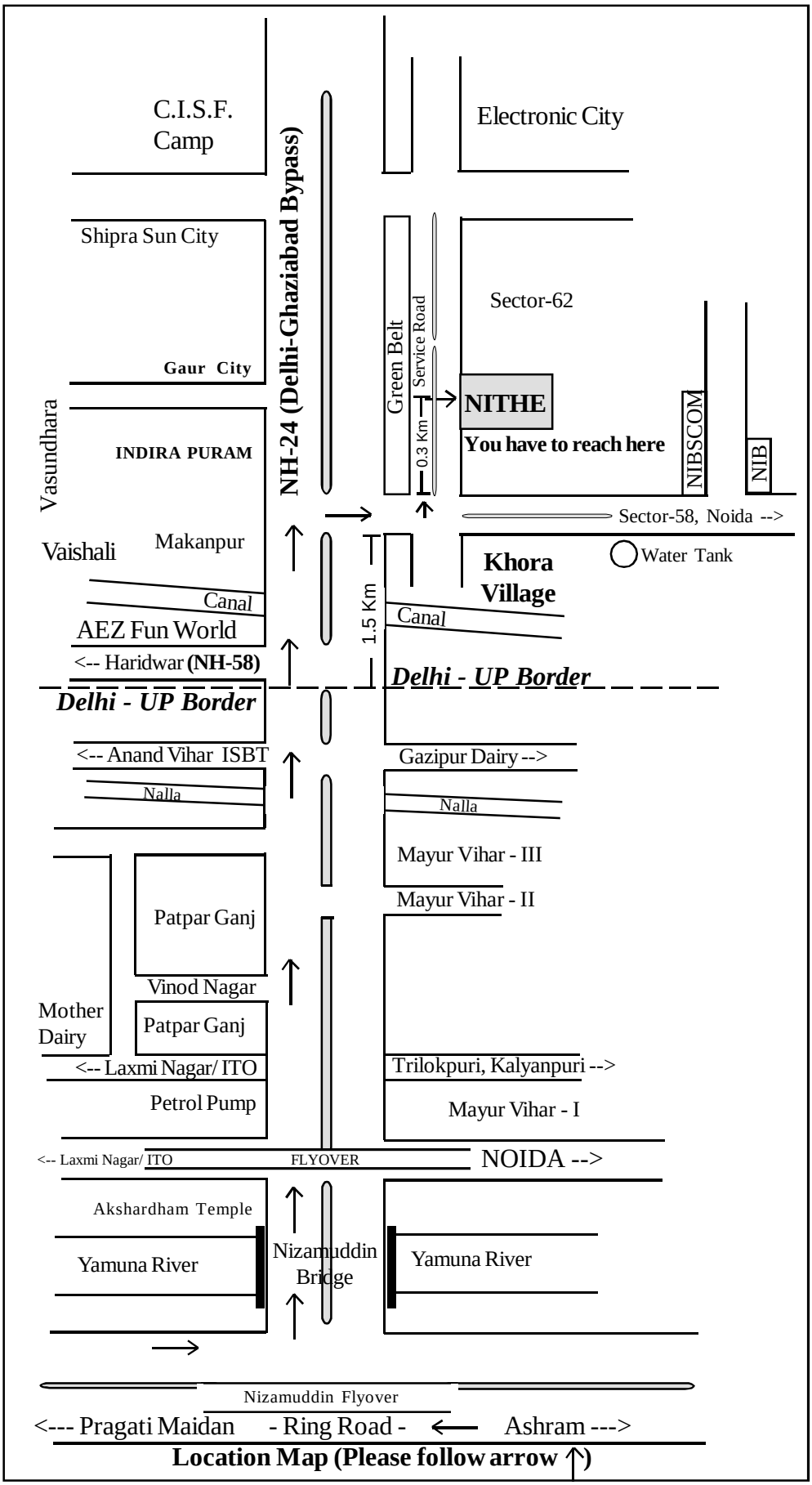
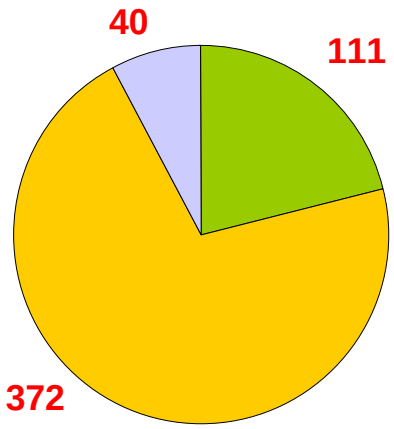
A-5, Institutional Area, Sector-62
NH-24 Bypass, NOIDA-201301 (UP)
Tel : 0120-2400085, 2400086, Fax : 2400087
Mobile No.09868146134, 011-27554690 (R)
E-Mail : nithe@bol.net.in, Website : www.nithe.org

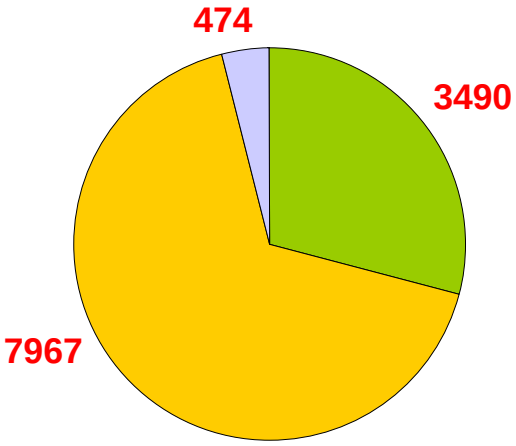

C.I.S.F. Camp
Electronic City
Shipra Sun City
Sector-62
Gaur City
Vasundhara
INDIRA PURAM
NH-24 (Delhi-Ghaziabad Bypass)
Green Belt
Service Road
0.3 Km
NITHE
You have to reach here
NIBSCOM
NIB
Sector-58, Noida -->
Vaishali
Makanpur
Water Tank
Khora Village
Canal
AEZ Fun World
1.5 Km
<-- Haridwar (NH-58)
Delhi - UP Border
Delhi - UP Border
<-- Anand Vihar ISBT
Gazipur Dairy -->
Nalla
Nalla
Mayur Vihar - III
Mayur Vihar - II
Patpar Ganj
Vinod Nagar
Mother Dairy
Patpar Ganj
<-- Laxmi Nagar/ ITO
Trilokpuri, Kalyanpuri -->
Petrol Pump
Mayur Vihar - I
<-- Laxmi Nagar/ ITO
FLYOVER
NOIDA -->
Akshardham Temple
Yamuna River
Nizamuddin Bridge
Yamuna River
Nizamuddin Flyover
<--- Pragati Maidan - Ring Road - Ashram --->
Location Map (Please follow arrow ↑)

Programmes conducted

- **Regional Level**
- **National Level**
- **International Level**



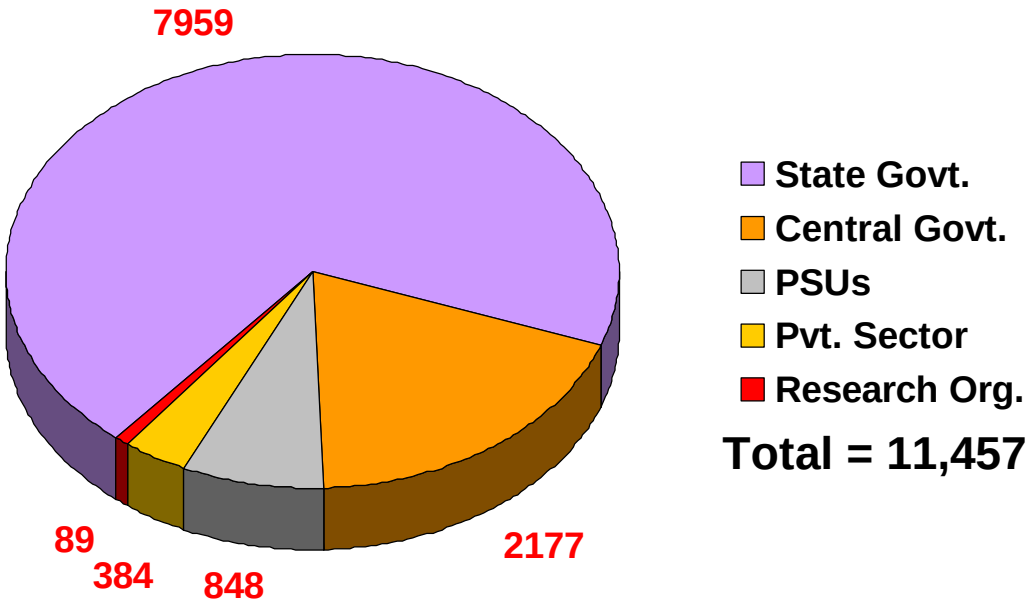
No. of Courses – 523



No. of Trainees – 11,931

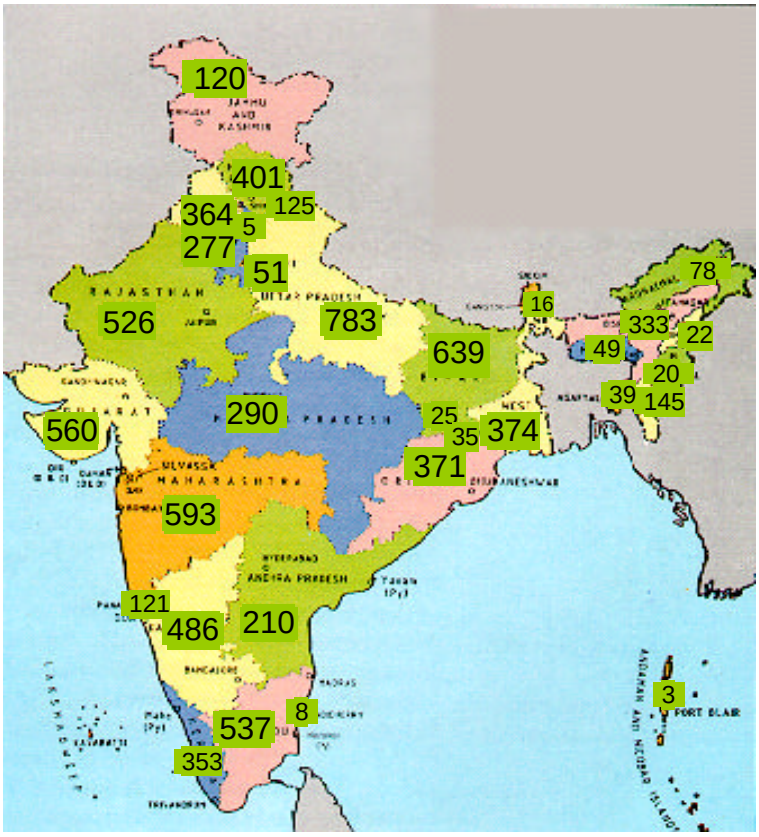
Upto 31.08.2006

Participation in National & Regional Programmes



Total = 11,457

Upto 31.08.2006



Statewise Participation

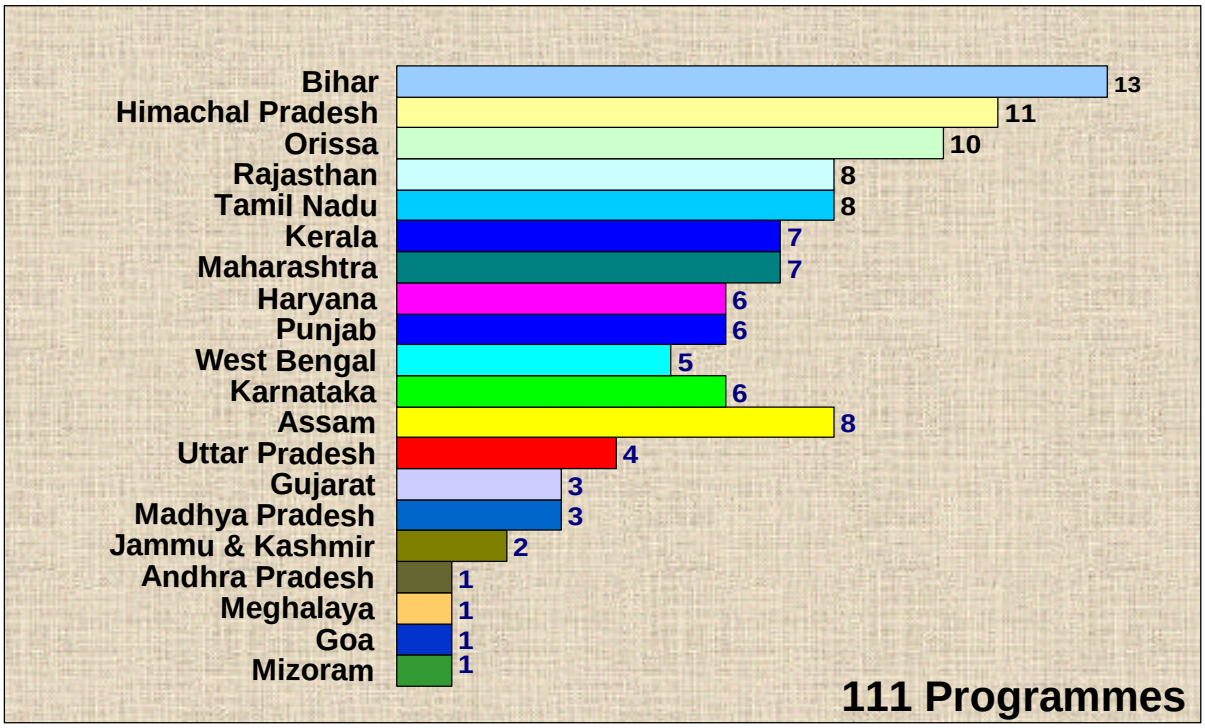
in

Regional and National programmes

(Total : 7959)

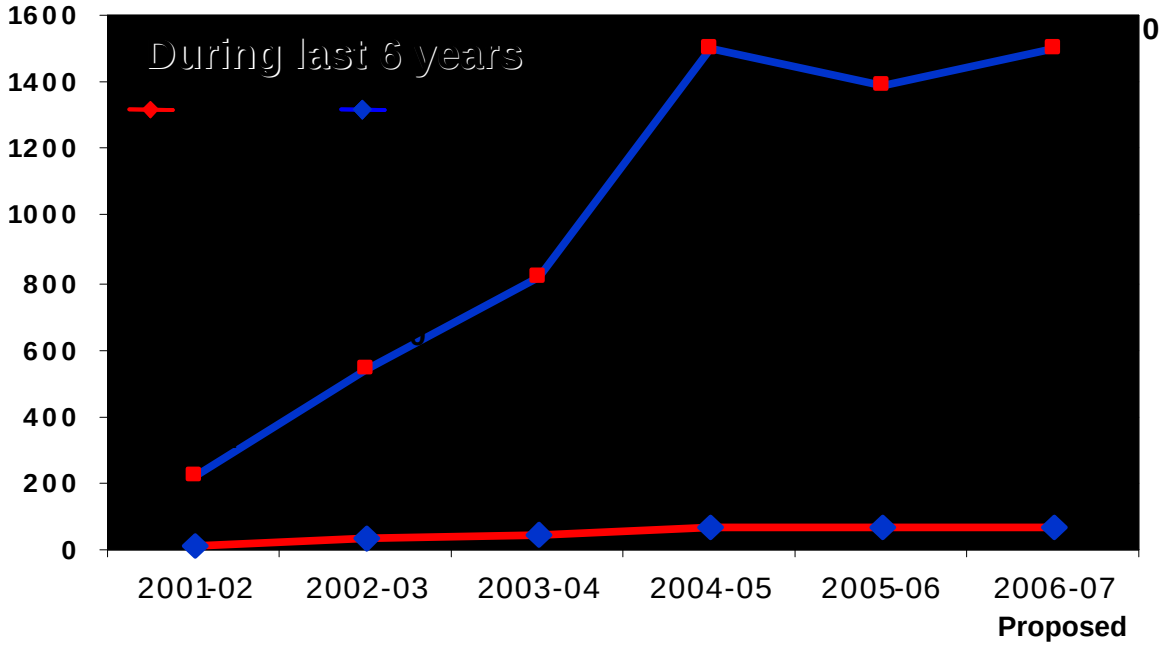
Upto 31.08.2006

Regional Programmes conducted in various States

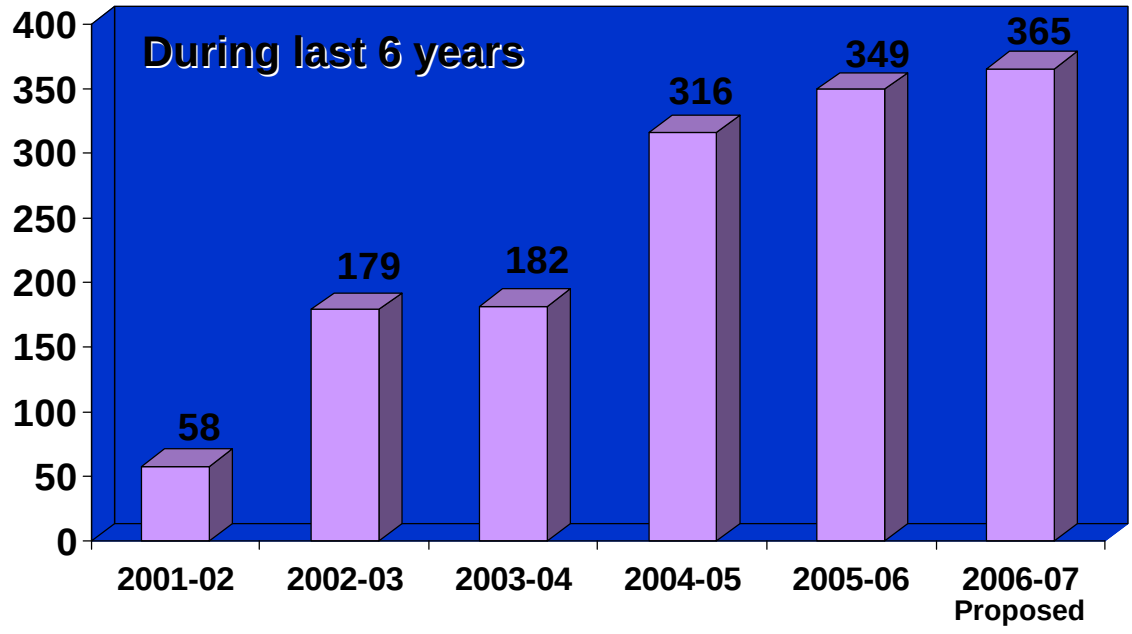


Upto 31.08.2006

Training Programmes and Participation



Training Days



Code : FC01

Course Title : Foundation Course for newly recruited Engineers

Duration : 4 weeks (20 days)

Class size : 20-30

Objective : Upon completion of the course the participants should become familiar with :

1. the working of the Ministry and State PWDs
2. current govt. policies in highway sector
3. elements of pavement and bridge design and IRC codes
4. essentials of project preparation of Roads/Bridges
5. domestic and international bidding documents
6. requirements of effective road maintenance
7. highway legislation

Course Contents :

A) Secreterial and Administrative Procedures of

- Central Government
- State PWDs, REOs etc.
- DIrect Payment Systems for NH Works

B) Planning for Road Development

- Roads as part of Overall Transport System
- History of Road Development
- Highway Administration (Role and functions of central and state government agencies)
- Current perspectives
- Long term Plans: Vision 2021
- Technology Upgradation
- Financing Mechanisms including Private Sector Participation
- Budget Systems

C) Project Preparation for Roads/Bridges

- Elements
- Surveys & Investigations
- Traffic Projections
- Pavement Designs
- Highway Geometrics
- Bridge Designs
- Feasibility Report
- Economic Analysis
- Social & Environmental Impact (EIA, EMP, SIA, R&R Plans)
- Detailed Project Report
- Case Studies

D) Implementation of Highway Projects

- Preconstruction Activities
- Procurement of Works and Contract Administration
  - SBD
  - FIDIC
- Supervision of Works, Quality Control, MOST Specifications
- Dispute Resolution
- Case Studies

E) Maintenance of Roads/Bridges

- Norms for different categories of Roads
- Financing & Institutional Issues
- Technical Aspects of Maintenance
- Condition Data, PMS
- Planning & Monitoring of Maintenance Intervention
- HDM 4
- Emergency Works
- Bridge Inspections

F) R&D in Highway Sector

G) Various Highway Acts, Motor Vehicles Act, Environment Protection Act

Course Co-ordinator : Deputy Director, NITHE

Course Faculty : Eminent professionals in the field (retired / serving) from M/o SRT&H, NHAI, BRO, CRRI, IITs, PSUs, State PWDs, REOs, Consulting and Contracting firms.

Target Group : This course is designed for freshly recruited Assistant Engineers and Assistant Executive Engineers of the Ministry of Shipping, Road Transport & Highways and State Road Agencies.

Course Fee : No fee for the engineers of M/o SRT&H and State PWDs.
Rs.52,000/- per participant for public and private sector engineers.

Code : RCEE02

Course Title : Refresher Course for Executive Engineers

Duration : 05 days

Class size : 25-30

Objective : Upon completion of the course the participants should become familiar with :

1. government policy in highway sector
2. new trends in design and construction of roads and bridges
3. issues in effective maintenance of roads
4. contract conditions and contract management
5. highway legislation

Course Contents :

A) Planning for Road Development

- Roads as part of Overall Transport System
- History of Road Development
- Highway Administration (Role and functions of central & state government agencies)
- Current perspectives
- Long Term Plan Vision 2021
- Technology Upgradation
- Financing Mechanisms including Private Sector Participation
- Budget Systems

B) Project Preparation for Roads/Bridges

- Elements
- Surveys & Investigations
- Traffic Projections
- Pavement Designs
- Highway Gepmetrics
- Bridge Designs
- Feasibility Report
- Economic Analysis
- Social & Environmental Impact (EIA, EMP, SIA, R&R Plans)
- Detailed Project Report
- Case Studies

C) Implementation of Highway Projects

- Preconstruction Activities
- Procurement of Works and Contract Administration
  - SBD
  - FIDIC
- Supervision of Works, Quality Control, MOST Specifications
- Dispute Resolution
- Case Studies

D) Maintenance of Roads/Bridges

- Norms for different categories of roads
- Financing & Institutional Issues
- Technical Aspects of Maintenance
- Condition Data, PMS
- Planning & Monitoring of Maintenance Intervention
- HDM 4
- Emergency Works
- Bridge Inspections

E) Various Highway Acts, Motor Vehicles Act, Environment Protection Act

Course Co-ordinator	:	Deputy Director, NITHE
Course Faculty	:	Eminent professionals in the field (retired / serving) from M/o SRT&H, NHAI, CRRI, IITs, PSUs, State PWDs,REOs, Consulting & Contracting firms.
Target Group	:	Executive Engineers of M/o SRT&H and State PWDs
Course Fee	:	No fee for the engineers of M/o SRT&H and State PWDs. Rs.10,000/- per participant for public & private sector engineers.

Code : RCSE03

Course Title : Refresher Course for Superintending Engineers

Duration : 05 days

Class size : 25-30

Objective : Upon completion of the course the participants shall become familiar with :

1. government policy in highway sector
2. new trends in design and construction of roads and bridges
3. issues in effective maintenance of roads
4. contract conditions and contract management
5. highway legislation

Course Contents :

A) Planning for Road Development

- Roads as part of Overall Transport System
- History of Road Development
- Highway Administration (Role and functions of central & state government agencies)
- Current perspectives
- Long term plans Vision 2021
- Technology Upgradation
- Financing Mechanisms including Private Sector Participation
- Budget Systems

B) Project Preparation for Roads/Bridges

- Elements
- Surveys & Investigations
- Traffic Projections
- Pavement Designs
- Highway Geometrics
- Bridge Designs
- Feasibility Report
- Economic Analysis
- Social & Environmental Impact (EIA, EMP, SIA, R&R Plans)
- Detailed Project Report
- Case Studies

C) Implementation of Highway Projects

- Preconstruction Activities
- Procurement of Works and Contract Administration
  - SBD
  - FIDIC
- Supervision of Works, Quality Control, MOST Specifications
- Dispute Resolution
- Case Studies

D) Maintenance of Roads/Bridges

- Norms for different categories of roads
- Financing & Institutional Issues
- Technical Aspects of Maintenance
- Condition Data, PMS
- Planning & Monitoring of Maintenance Intervention
- HDM 4
- Emergency Works
- Bridge Inspections

E) Various Highway Acts, Motor Vehicles Act, Environment Protection Act

Course Co-ordinator : Deputy Director, NITHE

Course Faculty : Eminent professionals in the field (retired / serving) from M/o SRT&H, NHAI, CRRI, IITs, PSUs, State PWDs, REOs, Financial institutions, Consulting & Contracting firms, etc.

Target Group : This course is designed for Superintending engineers.

Course Fee : No fee for the engineers of M/o SRT&H and State PWDs. Rs.10,000/- per participant for public & private sector engineers.

Code : RCME04

Course Title : Refresher Course for Mechanical Engineers

Duration : 05 days

Class size : 25-30

Objective : Upon completion of the course the participants shall become familiar with :

1. government policy in upgradation of construction technology
2. the latest trends in mechanised construction of roads and bridge works
3. the use of equipment for maintenance of roads and bridges
4. the type of equipment suitable and cost effective for variuos types of road and bridge works
5. essentials of equipment management

Course Contents :

A) Current Scenario of Road Development and Construction Technology

- History of Road Development
- Capacity Augmentation of Highways
- Push on mechanisation by World Bank and ADB
- Role of Mechanisation and Mechanical Engineers
- Encouraging Contractors to own equipment
- Equipment Bank Concepts

B) Road Building Machinery : Operating Principles

- Earth moving equipment
- Stone crushing equipment
- Compaction equipment
- Equipment for Wet Mix Macadam
- Hot Mix Plants and Paver Finishers
- Cement Concrete Paving Trains
- Chip Spreaders
- Sealing Equipment
- Kerb laying and pavement marking machines

C) Bridge Building Machinery : Operating Principles

- Piling Equipment
- Cement Concrete Batching Plant
- Increment Launching Equipment
- Bridge Inspection Units
- Cranes
- Other Bridge Equipments

D) Specifications for Road and Bridge Works

- Performance Standards
- Quality Control Tests

E) Equipment Management

- Elements of equipment management
- Safety aspects for workers
- Maintenance and Repairs
- Support from Equipment Industry

Course Co-ordinator : Deputy Director, NITHE

Course Faculty : Eminent professionals in the field (retired / serving) from M/o SRT&H, PWDs, BRO, Costruction firms, equipment manufacturers

Target Group : This course is designed for mechanical engineers at the level of Superintending Engineers, Executive Engineers and Assistant Engineers.

Course Fee : No fee for the engineers of M/o SRT&H and State PWDs.
Rs.10,000/- per participant for public and private sector engineers.

Code	:	FSDPRR05
Course Title	:	Feasibility Study & Preparation of Detailed Project Reports (DPR) for Road Projects
Duration	:	05 days
Class size	:	25-30
Objective	:	Upon completion of the course the participants will become familiar with: 1. requirement of good feasibility reports & DPRs including project estimates for road projects 2. geometric design and pavement design requirements of roads. 3. specifications and Quality Control requirements for road works 4. EIA, R&R and LA requirements in highway projects 5. essential elements of highway maintenance
Course Contents	:	1. Introduction - Stages in Project Preparation, Land Acquisition, Modern Surveying Techniques, Use of GIS, GPS & Total Station, Remote Sensing, etc., Road Inventory and Condition Survey of Roads, Material Survey and Geotechnical Investigations for Roads. 2. Environment Surveys, Environmental Impact Assessment/ EMP, Social Impact Surveys and Resettlement/Rehabilitation, Action Plan, RAP. 3. Traffic & Transportation Studies and Highway Safety, Computer Aided Design of Highways (Geometric design, alignment fixation, design of Intersections, master planning for wayside amenities). 4. Design of Flexible and Design of Rigid Pavements. 5. Economic Analysis of Highway Projects. 6. Ministry's Specifications for Road Works. 7. Preparation of DPR for Road Projects including, preparation of Estimates, preparation of Bidding Documents. 8. Quality Assurance System for Road Works, 9. Maintenance Aspects for Roads.
Course Co-ordinator	:	Deputy Director, NITHE
Course Faculty	:	Eminent professionals in the field (retired / serving) from M/o SRT&H, NHAI, CRRI, IITs, PWDs, Consulting and Contracting firms, etc.
Target Group	:	This course is designed for Executive Engineers, Assistant Engineers and middle level engineers from private sector.
Course Fee	:	No fee for the engineers of M/o SRT&H and State PWDs. Rs.10,000/- per participant for public and private sector engineers.

Code	:	FSDPRB06
Course Title	:	Feasibility Study & Preparation of Detailed Project Reports (DPR) for Bridge Projects
Duration	:	05 days
Class size	:	25-30
Objective	:	Upon completion of the course the participants will become familiar with: 1. requirements of good feasibility reports & DPRs including project estimates for bridge projects. 2. requirements of design of bridges (foundations, substructure and superstructure etc). 3. Ministry's specifications and quality control requirements for bridge works 5. essential elements of bridge inspection, maintenance and rehabilitation.
Course Contents	:	1. Introduction - Duties & Responsibilities of Peronnel, Explanation of Term of Reference (TOR) and Stages in Project Preparation, Land Acquisition, Modern Surveying Techniques, Use of GIS, GPS, Total Station, Remote Sensing, Preliminary Investigation, Topographical Survey, Hydrological Survey, Traffic Survey, Material Survey & Subsoil Investigation, Identification of Data Needs & Data Collection. 2. Finalisation of Site,Preliminary Engineering, Design Philosophy, Analysis of Data,Span arrangements, Preliminary Design, Aesthetics, GAD, Preliminary cost estimates. 3. Ministry's Specifications for Bridge Works. 4. Feasibility Study Report, Economic Analysis and Viability of Project. 5. Environment Survey, Environmental Impact Assessment (Principles and Process), Environmental Management Plan. 6. Preparation of DPR for Bridge Projects, Preparation of Detailed Estimates and Detailed Drawings including various components, Design of Bridges / Structures (Substructure & Superstructure) including Seismic Response Design, Design of Bridge Accessories, Bearings, Expansion Joints, Parapet/ Crash Barrier and Computer Applications in Design of Bridges. 7. Inspection, Repair, Rehabilitation & Replacement of Bridges. 8. Preparation of Bidding Documents, Quality Assurance Plan/ System, Organising works & Implementation Programme. 9. Maintenance aspects of Bridges.
Course Co-ordinator	:	Deputy Director, NITHE
Course Faculty	:	Eminent professionals in the field (retired / serving) from M/o SRT&H, NHAI, PWDs, Consulting and Contracting firms, etc.
Target Group	:	This course is designed for Executive Engineers, Assistant Engineers and middle level engineers from private sector.
Course Fee	:	No fee for the engineers of M/o SRT&H and State PWDs. Rs.10,000/- per participant for public and private sector engineers.

Code	:	DCMRP07
Course Title	:	Design, Construction and Maintenance of Rigid Pavements
Duration	:	03 days
Class size	:	25-30
Objective	:	Upon completion of the course the participants will become familiar with: 1. rigid pavements design 2. quality construction and supervison of rigid pavements 3. understand importance of QC in rigid pavements 4. mechanised construction 5. maintenance aspectes of rigid pavements
Course Contents	:	Design methods of Rigid Pavements, Material specifications for rigid pavements, Testing and Quality Control for rigid pavement construction, Construction of sub-base and base courses, Concrete Mix Design, Concrete Admixtures, Curing compounds, Fix-form and slip-form of paving, Mechanisation/equipment for construction of rigid pavements, Do's and Don'ts, maintenance aspects of rigid pavements and Case Studies.
Course Co-ordinator	:	Deputy Director, NITHE
Course Faculty	:	Eminent professionals in the field (retired/serving) from M/o SRT&H, CRRI, PSUs, Consulting & Contracting firms.
Target Group	:	This course is designed for Executive Engineers, Assistant Engineers and Junior Engineers
Course Fee	:	No fee for the engineers of M/o SRT&H and State PWDs. Rs.6,000/- per participant for public and private sector engineers.

Course No.	:	DCMFP08
Course Title	:	Design, Construction and Maintenance of Flexible Pavements
Duration	:	03 days
Class size	:	25-30
Objective	:	Upon completion of the course the participants will become familiar with: 1. design of flexible pavements 2. construction and supervision of flexible pavements 3. understand importance of QC 4. do mechanised construction 5. maintanence aspects of flexible pavements.
Course Contents	:	Design of Flexible Pavements, Material specifications for Sub-base & Base courses, Testing and Quality Control for flexible pavement construction, Construction of sub-base, bases and wearing courses, High embankment construction, Bituminous Mix Design, Polymer Modified Bitumen, Slurry Seal, Mirco sealing, Recycling, Mastic Asphalt, Mechanisation/equipment for construction of flexible pavements, Do's and Don'ts, maintanence aspects of flexible pavements
Course Co-ordinator	:	Deputy Director, NITHE
Course Faculty	:	Eminent professionals in the field (retired/serving) from M/o SRT&H, CRRI, PSUs, Consulting & Contracting firms.
Target Group	:	This course is designed for Executive Engineers, Assistant Engineers and Junior Engineers
Course Fee	:	No fee for the engineers of M/o SRT&H and State PWDs. Rs.6,000/- per participant for public and private sector engineers.

Code	:	MTDCBF09
Course Title	:	Modern Trends in Design and Construction of Bridges and Flyovers
Duration	:	03 days
Class size	:	25-30
Objective	:	Upon completion of the course the participants will become familiar with : 1. new trends in design and construction of bridges and flyovers 2. segmental construction techniques 3. prestressing & post tensioning techniques in precast and pretensioned girders 4. quality assurance in constructin of bridges 5. measures for safety in construction
Course Contents	:	New trends in design and construction of sub structures and super structures, foundation under artisan conditions, types of foundations, piling, sinking of wells, economics of types of structures, computer applications, grillage analogy, precast prestressed girders, segmental construction, prestressing, post tensioning, handling and erection, casting yard, temporary works, quality assurance in construction, mechanisation, equipment and plants, safety in construction, traffic management during construction, bridge bearings, expansion joints and accessories.
Course Co-ordinator	:	Deputy Director, NITHE
Course Faculty	:	Eminent professionals in the field (retired/serving) from M/o SRT&H, CRRI, PSUs, Consulting & Contracting firms.
Target Group	:	This course is designed for Executive Engineers and Assistant Engineers
Course Fee	:	No fee for the engineers of M/o SRT&H and State PWDs. Rs.6,000/- per participant for public and private sector engineers.

Code	:	BIRMMS10
Course Title	:	Bridge Inspection, Rehabilitation and Maintenance Management System
Duration	:	05 days
Class size	:	25-30
Objective	:	Upon completion of the course the participants will : 1. be able to plan for inspection and maintenance of bridges 2. become familiar with the new trends in bridge maintenance and rehabilitation 3. become familiar with performance monitoring of bridges 4. be able to get a BMS set up
Course Contents	:	Condition survey of bridges, inventory of bridges, rating of bridges, inspection and performance monitoring, mobile bridge inspection, non-destructive techniques, instrumentation in bridges, maintenance, repair, rehabilitation and replacement of bridges, corrosion detection and protection, repairs and strengthening techniques, repair of expansion joints, bearings, railings & footpaths, bridge maintenance management system, rehabilitation and replacement of bridges, contract maintenance, etc.
Course Co-ordinator	:	Deputy Director, NITHE
Course Faculty	:	Eminent professionals in the field (retired/serving) from M/o SRT&H, NHAI, CRRI, IITs, PSUs, Consulting & Contracting firms.
Target Group	:	This course is designed for Executive Engineers and Assistant Engineers
Course Fee	:	No fee for the engineers of M/o SRT&H and State PWDs. Rs.6,000/- per participant for public & private sector engineers.

Code	:	PIRR11
Course Title	:	Pavement Inspection, Repair & Rehabilitation
Duration	:	03 Days
Class Size	:	25-30
Objective	:	Upon completion of the course the participants will : 1. be able to plan for inspection and maintenance of roads 2. become familiar with the new trends of maintenance 3. become familiar with pavement repair and strengthening 4. become familiar with PMS and HDM-4
Course Contents	:	Condition survey of pavements, inventorisation and rating, inspection & perfiormance monitoring, non-destructive techniques, instrumentation, pavements distresses and remedial measures, maintenance norms, planning, maintenance policy, repair and strengthening, rehabilitation, recycling of pavements, performance based maintenance contract, contract maintenance, Mobile Road Maintenace System, PMS (HDM-4) etc.
Course Co-Ordinator	:	Deputy Director, NITHE
Course Faculty	:	Eminent professionals in the field (Retired/Serving) from M/o SRT&H, CRRI, IITs, PSUs, Consulting and Contracting firms.
Target Group	:	This course is designed for the officers of level of Executive Engineers, Assistant Engineers and equivalent.
Course Fee	:	No fee for the Engineers of M/o SRT&H and State PWDs. Rs.10,000/- per participant for public and private sector Engineeers.

Code	:	MTHECSG12
Course Title	:	Modern Techniques of High Embankment Construction on Soft Ground & Geosynthetics soil structures
Duration	:	04 days
Class size	:	25-30
Objective	:	Upon completion of the course the participants will become familiar with: 1. design & construct high embankments 2. use of flyash & waste material in embankment 3. use of geosynthetics, geogrids, geotextiles, etc. 4. materials properties for use and appropriate solutions for embankment on soft ground.
Course Contents	:	Design of high embankment on soft soil, Construction of high embankment on soft soil, stone columns, sand drains, band drains, geosynthetics and geogrids, lime-soil columns, pavement material charaterisation, sub soil investigation, soil stabilisation, use of flyash and waste materials in embankment construction, Testing and Evaluation and CD works, etc.
Course Co-ordinator	:	Deputy Director, NITHE
Course Faculty	:	Eminent professionals in the field (retired/serving) from M/o SRT&H, CRRI, IITs, PSUs, Consulting & Contracting firms.
Target Group	:	This course is designed for Executive Engineers and Assistant Engineers
Course Fee	:	No fee for the engineers of M/o SRT&H and State PWDs. Rs.8,000/- per participant for public and private sector engineers.

Code	:	TTEH13
Course Title	:	Traffic and Transportation Engineering for Highways
Duration	:	03 days
Class size	:	25-30
Objective	:	Upon completion of the course the participants will : 1. be acquainted about transport and traffic planning 2. be able to do economic and environmental evaluation 3. become familiar with concept of computer applications in traffic surveys, transport planning and management 4. become familiar about urban transport planning, geometric design, intersection design and safety related issues.
Course Contents	:	Traffic and Transport Planning, Transport Policy, MV Act and Regulations, Transportation Studies, Transport Analysis and Demand Forecast, Economic Evaluation and Environmental Apprisal, Impact Assessment, Noise and Air Pollution Studies, Mitigation Measures, Urban Transport/Public Transport Planning, Highway/Freight Transport Planning, Land Use Models, VOC, Road User Cost Studies, Cost-Benefit Analysis, Computer Applications in Planning, Traffic Surveys and Accident Investigations, Observational Survey, Participatory Survey, Accident Prevention and Reduction, Design for Capacity and Safety, Traffic Flow Theory, Geometric Designs (Urban and Highways), Intersection Design for Urban Roads and Highways, Computer Aided Design, Road Lighting, Traffic Control Devices, Planning for Terminals/Depots, Parking Lots, Planning for pedestrians, cyclists and disabled persons, Road Safety, Safety Audit, Traffic Management, Regulatory Measures, Physical Measures of Traffic Control, Signal Controls, Driver Information System, Road Markings and Signages, Use of ITS in Traffic and Transportation Management, System Operation and Management.
Course Co-ordinator	:	Deputy Director, NITHE
Course Faculty	:	Eminent professionals in the field (retired/serving) from M/o SRT&H, CRRI, Consultants, Contractors and other agencies wokring in the field.
Target Group	:	This course is designed for Executive Engineers and Assistant Executive Engineers.
Course Fee	:	No fee for the engineers of M/o RT&H and State PWDs. Rs.6,000/- per participant for public and private sector engineers.

Course No.	:	RSA14
Course Title	:	Road Safety and Road Safety Audit
Duration	:	05 Days
Class size	:	25-30
Objective	:	Upon completion of the course the participants would : 1. comprehend the safety importance for raods 2. be better equipped for safer road design 3. understand the purpose of road safety audit 4. understand what n road safety audit involves 5. develop skills in road side hazard management 6. appreciate different skills required to audit 7. be able to implement road safety policies
Course Contents	:	Road Safety Scenario in India, Implementing Safety Policies, Awareness and Education programmes, Traffic & Transportation Planning, Urban transport planning, Elements of road design, Intersection design, Signages, Line marking, Road side environment, Safety hazard and its management, Black spot identification and remedial measures, Safety during Construction. Traffic Management during Construction, MIS and Use of IT in Road Safety, Accident prevention and reduction, Systematic approach to control accidents/injuries and other safety related issues. Enforcement and legislation, Ribbon development, Vehicle design and safety, Environment and traffic, Statistical analysis and prevention measures. Road safety audit, Why to do road safety audit, How to do road safety audit, Who should do the audit, Impelmentation of safety audit, Audit Team, Step by step audit process, Conduct of safety audit, Audit checklist, Audit for new road and existing road, Day site inspection, Night site inspection, Conduct of audit, Audit reports, Responding to the audit reports, Follow up actions, Implementation of safety audits, Field visit to an existing road and conduct of safety audit. Syndicate work and presentation by participants, etc.
Course Co-ordinator	:	Deputy Director, NITHE
Course Faculty	:	Eminent professionals in the field (retired/serving) from M/o SRT&H, NHAI, CRRI, IITs, PSUs, Consulting & Contracting firms.
Target Group	:	This course is designed for Superintending Engineer and Executive Engineers
Course Fee	:	No fee for the engineers of M/o SRT&H and State PWDs. Rs.10,000/- per participant for public & private sector engineers.

Code : ESAHP15

Course Title : Environmental and Social Impact Assessment of Highway Projects

Duration : 03 days

Class size : 25-30

Objective : Upon completion of the course, the participants shall become familiar with :

1. the existing legal provision for protection of environment and equisition of land
2. carrying out EIA and formulating EMP
3. the social issues in road projects
4. formulating R&R plans
5. the role of NGOs
6. monitoring implementation of EMP and R&R plans during construction

Course Contents :

A) Policy of Government, World Bank and ADB
- Environment Protection Act
- Land Aquisition Act
- Guidelines and instructions of the Government
- Stipulations by the World Bank, ADB

B) Environment Management Plan
- Initial Environment Examination (IEE)
- Environment Impact Assessment (EIA)
- Environment Management Plan (EMP)

C) Social Concerns and Livelihood Issues
- Social Impact Assessment
- Resettlement & Rehabilitation (R&R) of affected persons
- Payment of Compensation and Entitlement
- Role of NGOs

D) Some Case Studies

Course Co-ordinator : Deputy Director, NITHE

Course Faculty : Eminent professionals in the field (retired / serving) from MORT&H, NHAI, PSUs, NGOs, World Bank, ADB, Financial institutions, Consulting firms, Environment Experts and Social Scientists etc.

Target Group : This course is designed for Superintending Engineers and Executive Engineers of MOSRTH and State PWDs.

Course Fee : No fee for the engineers of M/o RT&H and State PWDs.
Rs.6,000/- per participant for public and private sector engineers.

Code : PDCMHR16

Course Title : Planning, Design, Construction and Maintenance of Hill Roads

Duration : 05 days

Class size : 25-30

Objective : Upon completion of the course the participants shall become familiar with :

1. the special features of planning and design of roads in hill areas.
2. hill road geometrics and philosophy of stage construction.
3. emergency measures to deal with landslides.
4. environment consideration in planning and design
5. design elements of protective works, bridges and culverts.
6. safety measures needed on hill roads.
7. planning and implementation of maintenance interventions.

Course Contents :

A) Planning of Hill Roads

- Geological and environment considerations
- Alignment of new roads : Governing factors
- Reconnaissance Surveys, Remote SensingTechniques
- Development and Maintenance Needs

B) Geometric Design

- Horizontal curves
- Vertical curves
- Cross-section elements
- Stage construction principles

C) Pavement Design

- New construction
- Strenghtening of weak pavements
- Stage construction principles

D) Cross Drainage Structures

- Bridges
- Culverts
- Causeways

E) Protective Works
- Retaining Walls
- Breast Walls
- Parapets
- Crash barriers

F) Drainage Measures
- Surface drainage
- Sub-surface drainage

G) Safety Aspects
- Signs and Markings
- Safety Engineering Measures
- Safety Audit

H) Project Preparation
- Feasibility report
- Detailed Project Report

I) Construction
- Construction Techniques
- Specifications
- Quality Control

J) Maintenance
- Special needs of hill areas
- Norms
- Maintenance Planning and Management
- Dealing with landslides and soil erosion

Course Co-ordinator : Deputy Director, NITHE

Course Faculty : Eminent professionals in the field (retired / serving) from M/o SRT&H, BRO, CRRI, IITs, State PWDs (Hill States), Consulting & Contracting firms.

Target Group : This course is designed for EEs and AEs.

Course Fee : No fee for the engineers of M/o SRT&H and State PWDs.
Rs.10,000/- per participant for public and private sector engineers.

Code	:	PDOE17
Course Title	:	Planning, Design and Operation of Expressways
Duration	:	03 days
Class size	:	25-30
Objective	:	Upon completion of the course the participants will become familiar with: 1. Expressway Planning with Interaction experince 2. traffic diversion and Forecasting 3. Planning and Design for Grade Separators 4. Geometric Design of Expressway 5. Opertion and Maintenance of Expressways. 6. User Amenities-Planning and Design 7. Toll Operation- Planning and Design of Toll Plaza.etc. 8. Safety Audit.
Course Contents	:	Planning for construction of Expressways, Feasibility study, Traffic Studies, Terrain Classification, Geometric Design for Expressways, Design speed, Right of Way, Building line, Control lines, Lane width, Shoulder & Median design, Crossfall/Camber, Embankment design, Safety devices, Traffic design, Design of Horizontal alignment, Horizontal curves, Superelevation, Transition curves, Sight distance, Stopping distance, Vertical Alignment, Gradients, Vertical curves, Interchange design, Flyover and underpasses, Access control devices, Pavement Design, Specifictions, New Materials, Embankment Construction, Quality Control Tests and Acceptance Criteria, Road Safety, Road Markings and Siganages, Tolling Systems, Design of Toll Plaza, ETC, Corridor Management, Use of ITS, Operation and Maintenance of Expressways, etc.
Course Co-ordinator	:	Deputy Director, NITHE
Course Faculty	:	Eminent professionals in the field (retired/serving) from M/o SRT&H, NHAI, Consultants, Contractors and other agencies wokring in the field.
Target Group	:	This course is designed for Executive Engineers and Assistant Engineers.
Course Fee	:	No fee for the engineers of M/o SRT&H and State PWDs. Rs.6,000/- per participant for public and private sector engineers.

Code	:	PDCSMRR18
Course Title	:	Planning, Design, Construction, Supervision and Maintenance of Rural Roads (PMGSY Projects)
Duration	:	05 days
Class size	:	25-30
Objective	:	Upon completion of the course the participants will : 1. be able to understand importance of rural roads in the development of the rural areas 2. become familiar with planning and engineering aspects of rural roads and preparation of DPRs including estimates 3. be able to encourage use of waste materials / locally available materials 4. become familiar with specifications and quality control requirements of PMGSY Projects 5. be able to implement PMGSY projects in an effective manner
Course Contents	:	Pradhan Mantri Gram Sadak Yojana (PMGSY) Project Implementation - An Overview, Project Preparation for Rural Road Project (Planning, Connectivity, All weather Roads, Core Networking), Modern Survey Techniques for Rural Roads, Use of GIS, GPS, Total Station and Remote Sensing, Alignment and Geometric Design Standards for Rural Roads. Design and Construction of Flexible Pavements for Rural Roads, Design and Construction of Semi-Rigid and Rigid Pavements for Rural Roads. Materials for Rural Roads, Use of Waste Materials, Use of Locally available Materials, Specifications for Subgrade, Sub-bases, Bases and Surface Courses for Rural Roads, Rural Road Drainages, Field and Lab tests for Rural Road Construction, Design and Construction of Culverts and Small Bridges for Rural Roads. Contract Management and Bid Documents for Rural Roads, Quality Control in Rural Road Construction, Maintenance of Rural Roads. Environmental & Social Issues in Rural Roads, Land Acquisition, etc.
Course Co-ordinator	:	Deputy Director, NITHE
Course Faculty	:	Eminent professionals in the field (retired/serving) from M/o SRT&H, M/o RD, NRRDA, CRRI, REOs, PWDs, Consulting & Contracting firms.
Target Group	:	This course is designed for Executive Engineers, Assistant Engineers and Junior Engineers
Course Fee	:	No fee for the engineers of M/o SRT&H and State PWDs/REO's. Rs.10,000/- per participant for public and private sector engineers.

Code	:	PDAAEAP19
Course Title	:	Preparation of Claims, Disbursement Procedures, Accounting and Auditing of Externally Aided Projects
Duration	:	03 days
Class size	:	25-30
Objective	:	Upon completion of the course the participants will : 1. be able to scrutinise and prepare claims / w.r.t. procurement of works 2. understand disbursement procedures 3. become familiar with financial management 4. become familiar with accounting and auditing of works
Course Contents	:	Preparation of Claims, Procurement of Works of Externally Aided Projects, Financial Management of Externally Aided Projects, Disbursement Procedures, Disbursement and Audit Procedures of Externally Aided Projects, Accounting and Auditing of Externally Aided Projects, Case Studies on Auditing & Accounting, Claim applications & Disbursement, Role of various agencies viz. M/o Finance, CAA&A, RBI, World Bank/ADB & implementing agency,
Course Co-ordinator	:	Deputy Director, NITHE
Course Faculty	:	Eminent professionals in the field (retired/serving) from M/o SRT&H, M/o Finance, CAAA, RBI, NHAI, Financial institutions, World Bank, ADB, JBIC, etc.
Target Group	:	This course is designed for Assistant Engineers, Junior Engineers and Accounts Officers.
Course Fee	:	No fee for the engineers of M/o SRT&H and State PWDs. Rs.6,000/- per participant for public and private sector engineers.

Code	:	CCT20
Course Title	:	Cement and Concrete Technology
Duration	:	03 days
Class size	:	25-30
Objective	:	Upon completion of the course the participants will become familiar with: 1. cement concrete technology 2. design of the mix concrete for various works 3. quality control requirement of concrete works 4. new codes of practices and new concrete materials 5. inspection procedures by NDT etc.
Course Contents	:	Material specifications for Cement and Concrete, Material testing and quality control, Non-destructive testing and evaluation of concrete, concrete mix design, rapid method of mix design, mix design for flyash and special concrete, quality assurance in concrete construction, blended cement in concrete construction, ready mix concrete, durability requirements for concrete, repair and rehabilitation of concrete structures, use of chemical and mineral admixtures for cement concrete, special cements, corrosion of concrete - causes and remedies, testing of cement and concrete, inspection, testing & acceptance criteria, sampling and control techniques, use concrete additives viz. flyash, slag, silica fume, etc. in concrete works, PCC, RCC, PSC, self compacting concrete, new codes of practice, etc.
Course Co-ordinator	:	Deputy Director, NITHE
Course Faculty	:	Eminent professionals in the field (retired/serving) from M/o SRT&H, CRRI, NCCBM, Consultants, Contractors, etc.
Target Group	:	This course is designed for Executive Engineers, Assistant Engineers and Junior Engineers.
Course Fee	:	No fee for the engineers of M/o RT&H and State PWDs. Rs. 6,000/- per participant for public and private sector engineers.

Course No.	:	QCHP21
Course Title	:	Quality Control in Highway Projects
Duration	:	05 days
Class size	:	25-30
Objective	:	Upon completion of the course the participants will :

1. have better understanding of MOST Specifications.
2. become familiar with quality control stipulations in respect of materials and workmanship.
3. be able to do QC Tests for highway soils and materials and workmanship.
4. strenghthen their supervisory skills

Course Contents :

A) MOST Specifications for Road Works

B) Quality Control Standards

- Materials
- Workmanship

for various items of road works such as Earth Work,Sub-base,Base,Bitumen and Cement Concrete Pavements.

C) Tests and Testing Equipment for Soils aggregates, cement, bitumen, bitumen mixes, cement concrete

D) Field Laboratory set up by Contractors

E) Referral Cases

F) Quality Assurance Systems

Course Co-ordinator	:	Deputy Director, NITHE
Course Faculty	:	Eminent professionals in the field (retired / serving) from M/o SRT&H, NHAI, CRRI, IITs, PSUs, Consulting & Contracting firms.
Target Group	:	This course is designed for Executive Engineers, Assistant Engineers and Junior Engineers.
Course Fee	:	No fee for the engineers of M/o SRT&H and State PWDs. Rs.10,000/- per participant for public & private sector engineers.

Code : CSRBP22

Course Title : Construction Supervision of Roads and Bridges

Duration : 05 days

Dates :

Class size : 25-30

Objective : Upon completion of the course the participants will become familiar with obligation as "Engineers" on the Contract.

Course Contents :

A) Contract Administration
- FIDIC Conditions and Standard Bidding Document
- COPA (Conditions Of Particular Application)
- Role of Employer, Engineer, Contractor in project execution
- Schedule of Rates, BOQ

B) Specifications and Quality Control
- Technical specifications applicable for road & bridge projects
- Standards of performance laid down and frequency and types of field tests of material and workmanship
- Testing Procedures : Laboratory work, Field Lab

C) Safety During Construction

D) Keeping of records of Tests and Measurement of Works; Instructions to Contractor

E) Recommendations for Approval of Client

F) Processing of IPCs (Running Payments), Final Payments

G) Supervision during DLP (Defect Liability Period)

H) Procedure suggested for Dispute Resolution between the Employer and the Contractor

I) Case Studies
- Project Scope
- Set up of Supervision Consultant
- Field Laboratory
- Working on ground
- Success stories and pitfalls

Course Co-ordinator : Deputy Director, NITHE

Course Faculty : Eminent professionals in the field (retired/serving) from M/o SRT&H, NHAI, CRRI, IITs, PWDs, Consulting and Contracting firms.

Target Group : This course is designed for middle level engineers of Counsulting firms and GMs, Dy. GMs, EEs of NHAI/State PWDs.

Course Fee : No fee for the engineers of M/o SRT&H and State PWDs. Rs.10,000/- per participant for public and private sector engineers.

Code : QSTQMHP23

Course Title : Quality Systems & Total Quality Management for Highway Projects

Duration : 03 days

Class size : 25-30

Objective : Upon completion of the course the participants will :

1. be able to understand the requirements of specifications for road and bridge works.
2. become familiar with quality standards for highway projects
3. be able to implement the quality standards
4. become familiar with testing procedures

Course Contents :

A) Specifications for Roads and Bridge Works
- Performance standards
- Quality Control Tests

B) Quality Systems : Quality Control and Quality Assurance
- For Road works
- For Bridge works

C) Testing Procedures
- Sampling procedures
- Laboratory work on various Tests
- Laboratory Equipment

Course Co-ordinator : Deputy Director, NITHE

Course Faculty : Eminent professionals in the field (retired/serving) from M/o SRT&H, NHAI, CRRI, IITs, PWDs, Consulting firms.

Target Group : This course is designed for Assistant Engineers and Junior Engineers.

Course Fee : No fee for the engineers of M/o SRT&H and State PWDs.
Rs.6,000/- per participant for public and private sector engineers.

Code	:	CAHD24
Course Title	:	Computer Aided Highway Design
Duration	:	03 days
Class size	:	25-30
Objective	:	Upon completion of the course the participants will become familiar with: 1. the basic computer concepts 2. the use of computer softwares for design of piers, abutments and wingwalls 3. the use of computers for design of earthworks and flexible pavements 4. the use of computers for concrete mix design 5. the use of computers for preparing various reports, presentations using text, graphics & photographs etc. 6. the basics of surface modelling (MOSS/MX) software. 7. the basics of finite element design using STADD 8. the use of computers in Project Management
Course Contents	:	1. Computer Applications, History of Development of Computers, Computer Hardware, Computer Software, Operating Systems. 2. Slip circle stability analysis by simplified Bishop's method, circular slip surface method, Swedish slip circle method, Bishop's stability analysis of slopes, Wedge stability analysis, Settlement and consolidation analysis of compressible highway embankment, foundations. 3. Case Study on Profile Correction Course, Computer Aided Concrete Mix Design, Computer Aided Design of Flexible Pavements. 4. Computer Aided Bridge Design by STADD, Bridge Moving Load Analysis, Use of MOSS/MX, MXQ. 5. Computer Aided Project Management System, Road Investment Decision Model. 6. Introduction to Internet and highway related Web sites, etc.
Course Co-ordinator	:	Deputy Director, NITHE
Course Faculty	:	Eminent professionals in the field (retired/serving) from M/o SRT&H, NHAI, CRRI, PSUs, Management institutions, Consulting & Contracting firms, etc.
Target Group	:	This course is designed for Executive Engineers and Assistant Engineers.
Course Fee	:	No fee for the engineers of M/o SRT&H and State PWDs. Rs.6,000/- per participant for public & private sector engineers.

Code : CAHE25

Course Title : Computer Applications in Highway Engineering

Duration : 03 days

Class size : 25-30

Objective : Upon completion of the course the participants will become familiar with:

1. the basic computer concepts
2. the use of computer softwares for design of piers, abutments and wingwalls
3. the use of computers for design of earthworks and flexible pavements
4. the use of computers for concrete mix design
5. the use of computers for preparing various reports, presentations using text, graphics & photographs etc.
6. the basics of surface modelling (MOSS/MX) software.
7. the basics of finite element design using STADD
8. the use of computers in Project Management

Course Contents :

1. Computer Applications, History of Development of Computers, Computer Hardware, Computer Software, Operating Systems.
2. Slip circle stability analysis by simplified Bishop's method, circular slip surface method, Swedish slip circle method, Bishop's stability analysis of slopes, Wedge stability analysis, Settlement and consolidation analysis of compressible highway embankment, foundations.
3. Case Study on Profile Correction Course, Computer Aided Concrete Mix Design, Computer Aided Design of Flexible Pavements.
4. Computer Aided Bridge Design by STADD, Bridge Moving Load Analysis, Use of MOSS/MX, MXQ.
5. Computer Aided Project Management System, Road Investment Decision Model.
6. Introduction to Internet and highway related Web sites, etc.

Course Co-ordinator : Deputy Director, NITHE

Course Faculty : Eminent professionals in the field (retired/serving) from M/o SRT&H, NHAI, CRRI, PSUs, Management institutions, Consulting & Contracting firms, etc.

Target Group : This course is designed for Executive Engineers and Assistant Engineers.

Course Fee : No fee for the engineers of M/o SRT&H and State PWDs. Rs.6,000/- per participant for public & private sector engineers.

Code : CMHP26

Course Title : Contract Management for Highway Projects

Duration : 03 days

Class SIze : 25-30

Objective : Upon completion of this course the participants will become familiar with:

1. the use of guidelines for procurement of works
2. IBRD loans, IDA credits and ADB loans and employment of consultants on externally aided (WB & ADB) projects.
3. FIDIC conditions of contract, duties and roles of Employer and Engineer.
4. Dispute resolution mechanisms.

Course Contents :

A) Procurement of works and services

- Guidelines of World Bank and ADB in procurement of works (NCB & ICB)
- FIDIC conditions of contract, Standard Bidding Document
- Guidelines of World Bank and ADB in procurement of Supervision Consultants Services (NCB & ICB)

B) Contract Administration

- Importance of pre-construction activities
- Importance of sound DPR
- Role of Employers & Engineers in Externally Aided Proj.
- Role of Employers & Engineers in domestically funded Projects
- Rights and responsibilities of contractor in highway proj.
- Contract management aspects

C) Case Studies

- Procurement of civil works
- Procurement of supervision consulltant
- Recommendation of DRB on issue raised by Contractor and / or Engineer

Course Co-Ordinator : Deputy Director, NITHE

Course Faculty : Eminent professionals in the field (retired/serving) from M/o SRT&H, NHAI, CRRI, IITs, PSUs, Consulting & Contracting firms, etc.

Target Group : This course is designed for Superintending Engineers and Executive Engineeers.

Course Fee : No fee for the engineers of M/o SRT&H and State PWDs. Rs.6,000/- per participant for public & private sector engineers.

Code : DRHP27

Course Title : Dispute Resolution in Highway Projects

Duration : 03 days

Class size : 25-30

Objective : Upon completion of the course the participants will become familiar:

1. with principals of procurement of works and services
2. with FIDIC conditions of contract, duties and role of engineer and employer
3. with Dispute Resolution Mechanisms
4. with arbitration and reconciliation rules and regulations
5. with legal implications

Course Contents :

A) Procurement of Works and Services

- Guidelines of the World Bank and ADB in procurement of works (NCB and ICB)
- FIDIC conditions of contract, Standard Bidding Documents
- Guidelines of the World Bank and ADB in procurement of Supervision Consultants Services (NCB and ICB)

B) Contract Administration

- Importance of preconstruction activities
- Importance of sound DPR
- Role of Employees and Engineer in externally aided projects
- Role of Employees and Engineer in domestically funded projects
- Rights and responsibilities of the Contractor in highway projects
- Contract Management aspects

C) Dispute Resolution Mechanism

- Engineer's decision
- Dispute Review Board
- Arbitration

D) Case Studies

- Procurement of civil works
- Procurement of Supervision Consultant
- Recommendations of DRB on issues raised by Contractor and/ or Employer
- Awards by Arbitration Tribunal in the matter of disputes arising between Employer and Contractor

Course Co-ordinator : Deputy Director, NITHE

Course Faculty : Eminent professionals in the field (retired/serving) from M/o SRT&H, NHAI, State PWDs, Consulting & Contracting firms, etc.

Target Group : This course is designed for Officers of the level of Superintending Engineers and Executive Engineers.

Course Fee : No fee for the engineers of M/o SRT&H and State PWDs.
Rs.6,000/- per participant for public and private sector engineers.

Course No.	:	HDM-4
Course Title	:	Use of HDM-4 as an Appraisal Tool for Road Maintenance, Strenghthening Overlay interventions.
Duration	:	03 days
Class size	:	25-30
Objective	:	Upon completion of the course the participants will become familiar with economic analysis principles and HDM-4
Course Contents	:	Road investment appraisal, economic analysis, methods of economic analysis, Overview of Pavement Design and Maintenance norms. Introduction to HDM-4, Program capabilities and applications, PMS Concepts and Development of Pavement Management System using HDM-4, Program Structure, data base requirements and development, Input Output Options, Development of system for maintenance of roads, Program modules, Creating Database and Project Analysis, Case Study on Maintenance, Upgradation and Strengthening of Roads, Case Study on Optimum Maintenance Policy and timing of upgrading interventions. Case Study on Prioritisation of Road Maintenance, Economic decision making process, Calibration and adaption, Sensitivity Analysis (Theory and Demo), hands-on practice, etc.
Course Co-ordinator	:	Deputy Director, NITHE
Course Faculty	:	Eminent professionals in the field (retired/serving) from M/o SRT&H, NHAI, CRRI, IITs, World Bank, RITES, Consulting & Contracting firms.
Target Group	:	This course is designed for Executive Engineers and Assistant Engineers
Course Fee	:	No fee for the engineers of M/o SRT&H and State PWDs. Rs.6,000/- per participant for public and private sector engineers.

Code	:	DMHS29
Course Title	:	Disaster Management in Highway Sector
Duration	:	03 days
Class size	:	25-30
Objective	:	Upon completion of the course the participants will : 1. be able to understand the need for disaster management 2. be able to form quick responce teams 3. be able to mitigate/prevent while planning and designing 4. be able to implement Govt. policies 5. be able to prepare preparedness plans
Course Contents	:	Disaster Management (DM) initiatives taken by the Govt. of India, DM Policies at Centre, State and District level, DM for Highway Sector, Pre-Disaster Mitigation - Prediction, Preparedness, Prevention, Planning, Protection, Promotion, Publicity, Participation and Partnership, Post-Disaster Initiatives-Rescue, Recovery, Restoration, Relief, Rehabilitation, Recontruction, Repair, Renewal and Retrofitting. Use of GIS, GPS, Remote sensing in prediction, seismic studies, forecasting and assessment, information sharing, investigation and safety evaluation, crisis management, natural calamities like flood, cyclone, landslide, fire, earthquake & avalanche, disaster management equipments viz. dozers, excavators, crushers, cutters, shearer, breaker, grappler, resource mobilisation/ operations, disaster mitigation, prevention & management plans, rescue and relief plans, emergency response plan, rapid action teams, inter-organisational networks, role of various agencies in mitigation, earthquake response designing and planning, repair, rehabilitation and rehabilitation works, documentation, database development and research, etc.
Course Co-ordinator	:	Deputy Director, NITHE
Course Faculty	:	Eminent professionals in the field (retired/serving) from M/o SRT&H, BRO, Army Hqs, NHAI, CRRI, NIDM, IITs, PSUs, UNDP, NGOs, Consulting & Contracting firms, etc.
Target Group	:	This course is designed for Superintending Engineers and Executive Engineers
Course Fee	:	No fee for the engineers of M/o SRT&H and State PWDs. Rs.6,000/- per participant for public and private sector engineers.

Code	:	MDP30
Course Title	:	Management Development Programme
Duration	:	03 days
Class size	:	25-30
Objective	:	Upon completion of the course the participants will : 1. be able to feel energetic, motivated and well managed 2. be able to implement the policies and achieve the targets of the organisation in efficient manner 3. be able to develop leadership, excellence, behavioural aspect, communication skills, team work, etc.
Course Contents	:	As for EDP -09,Leadership, Excellence, Appreciation, Motivation, Behavioural Science, Effectiveness, Stress Management, Problem Solving, Communication Skills, Writing skills, Time Management, Team Building, Work Culture, Creative Thinking, Managerial Effectiveness, Transactional Analysis, Emotional intelligence, Change of Attitude, Management by Priority, Vigilance, MIS, Computer applications/office automation, Potential management, Performance management, Financial management, Zero-base budgeting, Art of Living/Self Management, etc.
Course Co-ordinator	:	Deputy Director, NITHE
Course Faculty	:	Eminent professionals in the field (retired / serving) from Public Admin. Institutions, PSUs, Management institutions, Consulting & Contracting firms, etc.
Target Group	:	This course is designed for Superintending Engineers and Senior Executive Engineers
Course Fee	:	No fee for the engineers of M/o SRT&H and State PWDs. Rs.6,000/- per participant for public & private sector engineers.

Code	:	EDP31
Course Title	:	Executive Development Programme
Duration	:	03 days
Class size	:	25-30
Objective	:	Upon completion of the course the participants will : develop managerial skills, leadership qualities, behavioural aspects, communication skills, team work, and improve efficiency in delivery of projects and programs.
Course Contents	:	Leadership, Excellence, Appreciation, Motivation, Behavioural Science, Transactional Analysis, Effectiveness, Stress Management, Problem Solving, Communication Skills, Writing skills, Time Management, Team Building, Work Culture, Creative Thinking, Managerial Effectiveness, Emotional intelligence, Change of Attitude, Personnel Management, Vigilance, MIS, Computer applications/office automation, Potential management, Performance management, Financial management, Zero-base budgeting, Sharing of views on current issues and challenges in Highway Sector : Capacity Augmentation, Connectivity, Safety, Environment, Maintenance, Social Concerns, Land Management, Level of Service to Users, Contract Administration, Private Financing Initiatives Art of Living/Self Management, etc.
Course Co-ordinator	:	Deputy Director, NITHE
Course Faculty	:	Eminent professionals in the field (retired / serving) from Public Admin. Institutions, PSUs, Management institutions etc.
Target Group	:	This course is designed for Officers at the level of Secretaries, Engineers-in-Chief and Chief Engineers.
Course Fee	:	No fee for the engineers of M/o SRT&H and State PWDs. Rs.6,000/- per participant for public & private sector engineers.

Code	:	NTHS32
Course Title	:	New Trends in Highway Sector
Duration	:	02 days
Class size	:	25-30
Objective	:	Upon completion of the course the participants will : 1. be able to foresee future requirements of road sector 2. be able to prepare for growing needs 3. be able provide better user facilities 4. become familiar about the policies and thrusts of the governemnt 5. be able to plan for environment friendly safe roads
Course Contents	:	Emerging areas of Highway Sector, Govt. Policies and Thrusts, Resources Mobilisation, Future Demand, Sustainable Funding Mechanism, Financial Management, Public-Private Partnership for Highway Development, International Practices of Development, Contract Management and Dispute Resolution Mechanism, Procurement of Works from WB, ADB & JICA, Environmental and Social Issues, Safety Issues, Development of Environment friendly Energy Efficient and Safe Transportation System, Multi-modal Transportation System, Operation and Maintenance Issues, Corridor Management, Tolling Systems, Highway User Facilities, Need and Concerns of Stakeholders, Real Estate Development, Training of Engineers, Research and Development, Documentation, New Materials, Innovative Designs, Project Planning and Implementation, Lessons learnt from NHDP and PMGSY, Success stories, Professionalism in Highway Sector, Beyond NHDP and PMGSY.
Course Co-ordinator	:	Deputy Director, NITHE
Course Faculty	:	Eminent professionals in the field (retired/serving) from M/o SRT&H, NHAI, NRRDA, IITs, CRRI, Consultants, Contractors, Financial Institutions, WB, ADB, etc.
Target Group	:	This course is designed for Secretaries, Chief Engineers and Superintending Engineers.
Course Fee	:	No fee for the engineers of M/o SRT&H and State PWDs. Rs.4,000/- per participant for public and private sector engineers.

Code	:	FABP33
Course Title	:	Financial Analysis of BOT Projects
Duration	:	02 days
Class size	:	25-30
Objective	:	Upon completion of the course the participants will : 1. be able to foresee future requirements of road sector 2. be able to prepare for growing needs 3. be able provide better user facilities 4. become familiar about the policies and thrusts of the governemnt 5. be able to plan for environment friendly safe roads
Course Contents	:	Govt. Policies and Thrusts, Public-Private Partnership, Concession Agreement, Viability analysis, Cash flow analysis, Financial analysis, Funding mechanism, Dispute Resolution Mechanism, Environmental, Social & Safety Issues, Operation & Maintenance Issues, User Facilities, Tolling Systems, Financial Management, Risks allocation, Need and Concerns of Stakeholders, Case Studies - International Practices, Success stories, etc.
Course Co-ordinator	:	Deputy Director, NITHE
Course Faculty	:	Eminent professionals in the field (retired/serving) from M/o SRT&H, NHAI, NRRDA, IITs, CRRI, Consultants, Contractors, Financial Institutions, WB, ADB, etc.
Target Group	:	This course is designed for Secretaries, Chief Engineers and Superintending Engineers.
Course Fee	:	No fee for the engineers of M/o SRT&H and State PWDs. Rs.4,000/- per participant for public and private sector engineers.