



***Capsule Course on
National Building Code
of India 2016***

Structural Design

07-09 October 2024



BUREAU OF INDIAN STANDARDS

**Ministry of Consumer Affairs, Food & Public Distribution
Government of India**

National Building Code of India 2016 (NBC 2016) is a prestigious publication of Bureau of Indian Standards (BIS) which is widely used by the various stakeholders, such as building regulatory departments, government construction departments, builders/developers, private construction agencies/contractors, building material manufacturers and suppliers, building professionals (like civil engineers, structural engineers, architects, urban designers, landscape architects, town planners and building services engineers) and consultants, academic institutions and R&D organizations.

NBC 2016 is intended to help regulate and guide the building construction activity in the whole of the country, particularly the municipal corporations, municipalities, development authorities and other local bodies, public works departments and other construction departments and agencies dealing with land development and building construction. NBC 2016 thus serves as a model for adoption by PWDs and other construction departments, local bodies and other construction agencies. The Code focuses on functionality, accessibility, sustainability and safety covering structural safety, fire safety, health safety and public safety. The Code covers aspects such as administration; development control rules; general building requirements; fire and life safety; selection of building materials; structural design using various material streams; construction project management, practices and safety; various building and plumbing services; sustainability in buildings and built environment; and asset and facility management.

The country is on the path of rapid urbanization and development. Considering the importance of the Code in ensuring quality and safety of the buildings and related infrastructure, it is important that various stakeholders contributing to building planning, design, construction and operation and maintenance are well aware of the provisions of NBC 2016 for judicious implementation of the provisions and intent of the Code. **Bureau of Indian Standards (BIS)**, being the National Standards Body of the country through its training arm, the **National Institute of Training for Standardization (NITS)** has designed the following short-term courses on NBC 2016 for national capacity building:

- 1. Accessibility in Buildings and Built Environment;**
- 2. Fire and Life Safety;**
- 3. Structural Design;**
- 4. Soil and Foundation Engineering;**
- 5. Air Conditioning, Heating and Mechanical Ventilation; and**
- 6. Plumbing Services.**

Learning Objectives

- *Bridging the competence gap in the skills of personnel currently involved & working with the municipal corporations, municipalities, development authorities, public works departments and other construction agencies, builders/developers, building professionals, etc. involved in land development and building construction activities.*
- *Making participants skilled enough to be achieving proficiency in building design and construction including matters relating to quality, safety and accessibility.*

Who should attend?

- *All those concerned with city planning, building regulation, and planning, design, construction and maintenance of buildings and built assets and facilities.*

Course Schedule & Duration

- *The Course is of 3 days duration scheduled during **07-09 October 2024** at **NITS, Noida**.*

Fees

- *Rs. 2,000/- plus applicable GST (for three-day course).*

How to Apply?

- *Application has to be made through BIS Training Portal through the following link www.manakonline.in or by emailing filled-up application form to nits@bis.gov.in (please see the details given after the Training Module).*

Criteria for Selection and Batch Size

- *Batch size – 40*
- *Selection on a First come First serve basis*

Certification

- *Certificate of participation on completion of the course.*

Venue

- *The course will be run by NITS, Noida at its campus at:
National Institute of Training for Standardization
A-20&21, Institutional Area
Sector 62, Noida
Pin 201301
(Uttar Pradesh)*
- *Hostel facilities at NITS, Noida can be availed on payment basis.*

Training Module

Three-Day Capsule Course on National Building Code of India 2016 – Structural Design

Date: 07-09 October 2024

Venue: National Institute of Training for Standardization, Noida

<i>Time</i>	<i>Topic</i>
DAY 1: 07 October 2024 (Monday)	
10:00 h - 11:30 h	Introduction Framework of NBC 2016 Chapters and Provisions Loads, Forces and Effects
11:30 h - 11:45 h	Tea Break
11:45 h - 13:15 h	Masonry Materials, masonry design including earthquake resistant building design Confined masonry
13:15 h - 14:15 h	Lunch Break
14:15 h - 15:45 h	Plain, Reinforced and Prestressed Concrete Fundamentals of design and analysis Limit state design Fundamentals of Liquid retaining RC structures
15:45 h - 16:00 h	Tea Break
16:00 h - 17:30 h	Plain, Reinforced and Prestressed Concrete Fundamentals of prestressed concrete Examples and case studies
DAY 2: 08 October 2024 (Tuesday)	
10:00 h - 11:30 h	Glass & Glazing
10:30 h - 11:45 h	Tea Break
11:45 h - 13:15 h	Plain, Reinforced and Prestressed Concrete Concrete making materials Concrete durability, mix proportioning, production, placing and compaction, etc. Concreting under special conditions Quality control and acceptance criteria
13:15 h - 14:15 h	Lunch Break
14:15 h - 15:45 h	Timber and Bamboo
15:45 h - 16:00 h	Tea Break
16:00 h - 17:30 h	Discussions on defects in construction leading to adverse impact on structural performance
DAY 3: 09 October 2024 (Wednesday)	
10:00 h - 11:30 h	Prefabricated Concrete
11:30 h - 11:45 h	Tea Break
11:45 h - 13:15 h	Steel Design Materials & basic concepts in steel structure design Examples and case studies
13:15 h - 14:15 h	Lunch Break
14:15 h - 15:45 h	Soil and Foundation Subsurface investigation Concepts of foundation design
15:45 h - 16:00 h	Tea Break
16:00 h - 17:30 h	Open Discussion and Clarification



National Institute of Training for Standardization (NITS) Bureau of Indian Standards

CAPSULE COURSE ON NBC 2016 –
Air Conditioning, Heating and Mechanical Ventilation
07-09 October 2024 AT NITS, NOIDA

PROCEDURE

The Application has to be made through BIS "Training Portal" as explained below

VISIT the **E-BIS Website:** www.manakonline.in

CLICK on the "**Training**" Head

LOGIN by clicking on the blue "**LOGIN**" button on the top right corner

SIGNUP by clicking on "**SIGNUP**" on the Member Login Page if you are not a member otherwise "**SIGN IN**" using your credentials

FILL OUT all the fields and click on "**REGISTER**" and complete the registration process.

CHOOSE the course you want to apply for, fill in the required information and "**PAY**" the requisite fee.

For any further queries, you may contact:

Shri Manish Kumar Shukla
Graduate Engineer Trainee (NITS)
Manishshukla.ms79@gmail.com
Mobile. 7007045055

Smt. Madhurima Madhav
Scientist-E/Director (NITS)
madhurima@bis.gov.in
Mobile: 9560886417



मानकीकरण प्रशिक्षण संस्थान, नोएडा / NATIONAL INSTITUTE OF TRAINING FOR STANDARDIZATION, NOIDA
भारतीय मानक ब्यूरो / BUREAU OF INDIAN STANDARDS

Nomination Form

Name of the Programme			
Date of the Programme		Venue:	
Sponsoring Organization (OR in Individual Capacity) with complete Address			
Telephone /Mobile Number			
Organization/Firm GST No.			
Email ID			

Participants Details

Sl. No.	Name (IN CAPITAL LETTERS)	Designation	Contact No.	Email
1.				
2.				
3.				
4.				
5.				

Will you stay in Hostel?		If Yes, Please mention the date and time					
Yes	No	Arrival	Date	Time	Departure	Date	Time

Details of Payment (in Rupees)

Training Fees *	Hostel Charges *	GST ##	Discount, if any	Total amount

Mode of Payment

Name of Bank	UTR No. & Date of transaction # (for NEFT/Net banking/ IMPS/UPI payment)	Amount (in Rs.)

* For Training/hostel fees, see NITS Training Calendar at BIS website www.bis.gov.in. (Stay in hostel is charged on Night stay basis).

For payments by **NEFT**, Payment should be made to **Bureau of Indian Standards, Savings A/c No. 712210100000650, Bank of India, Sec-62 Noida, Branch Code 7122, IFSC Code BKID0007122.**

NITS GST No. 09AAATB0431G2Z8, SAC Code: 999294 Applicable GST@ 18% on Training fee and Hostel fee.

Date: _____

Signature and Seal: _____

The nomination form should preferably be scanned and e-mailed to nits@bis.gov.in, hnits@bis.gov.in and reach NITS at least one week before the programme date. For sending hard copy may be addressed to:

Head, National Institute of Training for Standardization (NITS), Bureau of Indian Standards, A – 20 & 21, Institutional Area, Sector – 62, NOIDA - 201309, U.P.

Phones: 0120 – 4670227, 4670232, Email: nits@bis.gov.in, hnits@bis.gov.in, Website: <http://www.bis.gov.in>

Important:

- Participants are requested to get the confirmation from NITS, whether, nomination has been accepted or not **before attending the programme.**
- Rules for Refund of Training & Hostel Fees:**
 - A refund of full fees shall be made when cancellation/withdrawal of nomination is made **at least 15 days** in advance of the date of the training.
 - Cancellation/withdrawal of nomination is made **less than 15 days** in advance of the date of the training programme or is not informed, a **cancellation charge of 25%** of the training fees would be levied. The balance amount after deducting the cancellation charges would be returned.
 - Hostel fees if any, paid in advance shall be returned in full.



Reach Us

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 Bureau of Indian Standards
 A 20&21, Institutional Area,
 Sector 62, NOIDA 201309, UP
 Phone: +91 120 4670227 / 232
 Email: nits@bis.gov.in, hnits@bis.gov.in



bis.gov.in