TRAINING STRATEGY OF BUREAU OF INDIAN STANDARDS 2023-24

National Institute of Training for Standardization,
BUREAU OF INDIAN STANDARDS
A 20-21, Institutional Area, Sector 62, Noida, India

1. INTRODUCTION

1.1 Bureau of Indian Standards (BIS), the National Standards Body (NSB) of India was established under the BIS Act, 1986 and came into existence on 1 April 1987 assuming the functions of the erstwhile Indian Standards Institution (ISI). The ISI came into being on 6 January 1947. Subsequently, the BIS Act, 2016 came into force on 12 October 2017 superseding BIS Act 1986 and provided for BIS to be the National Standards Body, responsible for the harmonious development of the activities of standardization, conformity assessment and quality assurance of goods, articles, processes, systems and services and for matters connected therewith or incidental thereto.

1.2 BIS through its core activities of standardization and conformity assessment, has been benefiting the national economy by providing safe, reliable and quality goods; minimizing health hazards to consumers; protecting the environment, promoting exports and imports substitutes; controlling over proliferation of varieties, etc. The standards and certification schemes of BIS apart from benefitting the consumers and industry also support various public policies especially in areas of product safety, consumer protection, food safety, environment protection, building and infrastructure development, etc. BIS has 5 Regional office and 38 Branch Offices spread across India offering certification services to the industry and serve as an effective link between State Governments, industries, technical institutions, consumer organization etc. In addition, BIS also has a network of 8 laboratories.

1.3 Now, being the National Standards Body of India, BIS has the responsibility to lead and co-ordinate the standardization activities in the country so as to meet the emerging standardization needs and expectations of Indian Industry, Government and consumers. Realizing this, BIS has brought out the Standards National Action Plan 2022-27, to outline the new priorities and the strategic way forward in advancing the goals of national standardization in emerging areas. The SNAP envisions to determine the strategic initiatives that BIS as the National Standards Body needs to consider so as to:

a) Create strong and trusted eco-system for national standards development in the country that is broad-based, inclusive, responsive and efficient in meeting the challenges posed by economic and technological developments;
b) Support uptake of current technologies and best practices by industry and business through standards so as to create competitive advantage, enter new markets and foster innovation;
c) Promote the key message and benefits of standards among the policy makers, industry and public at large; and
d) Align national standardization efforts to enhance competitive position of Indian products and services and establish a Brand India quality in global market, while addressing issues of sustainability and climate change.

1.3 In order to achieve the targets set in SNAP 2022, it is imperative that all stakeholders involved i.e. both external and internal not only understand their roles and expectations from them but also have the capability and capacity to discharge their responsibilities and duties.

1.4 Further, the ever changing environment of technological advancements and the enactment of the BIS Act 2016 has substantially changed the roles & responsibilities of BIS vis-a`- vis its stakeholders like the Industries & their associations, Central/State Govt. Bodies & associated Departments, Research & Academic Institutions and Consumers & Consumer Groups/NGOs/RWAs etc. It is therefore imperative that BIS takes such initiatives that it continues to remain relevant.

1.5 One such endeavour of BIS is to make learning one of the fundamental values of the organization to build capability and capacity, encompassing not only its employees and personnel working for and its behalf but also personnel from all identified stakeholders. This could be achieved through systematic training and re-training of external and internal stakeholders through focussed training on aspects directly related to efficient discharge of duties, workshops, on-the-job trainings, and also the general training for enabling overall personality development. In order to achieve its overall goal of performance improvement, training has to be planned and systematic and must lead to the enhancement of professional knowledge and skills both at individual and collective levels. It should also equip personnel to respond appropriately to emerging challenges. Training should also bring about appropriate changes in attitudes and should strive for that unique synthesis between improvement of the individual's competencies and promotion of organisational objectives. Thus, the term 'performance' is, therefore, interwoven with training.

2. OUR STAKEHOLDERS AND EXPECTATIONS OF ENGAGEMENT

2.1 External Stakeholders of BIS can be broadly classified into the following categories:

a) Industry/Industry Associations
b) Central/State Government Ministries and Departments
c) Academic Institutions
d) Consumers
e) International Trainees
f) Technical Committee Members

2.2 Industry/Industry Associations - Industry is one of the major stakeholders of BIS both for formulation/revision of standards and implementation of standards once they are published. It is therefore necessary that a proactive mechanism is put in place so that Industry is able to effectively contribute towards development of efficient and relevant Indian standards. One such initiative is encouraging the Industry associations to create Standardization Cells and Standardization Forums. Although a few Associations have created such cells it is seen that they are still not fully aware of the role of and expectations from such Standardization Cells. It is therefore necessary that training is provided to them to bring in more clarity and increase the effectiveness of such initiatives.

Industry is also responsible for implementation of the published standards. However, lack of availability of competent quality control personnel is often cited as major reason for non-implementation of standards. It is therefore necessary that BIS trains Industry personnel regarding implementation of various standards. Codes of practices, systems and important documents such as NBC and NEC etc.

2.3 Central/State Government Ministries and Departments - It is important that National Standards must be open, timely and relevant. At the same time, they must also complement the National priorities. In order to achieve this, it is necessary that each of the central

ministries/departments must prepare an Annual Programme for Standardisation for the next financial year, based on the policies and programmes of the ministry/department and after consultation with the subordinate organisations, R&D bodies, their counterparts in the State Governments, representatives of Industries concerned and other stakeholders. This will bring in absolute clarity, therefore, regarding the priority areas for standardisation at the beginning of the year itself and technical committees can then draw their action plans accordingly. However, Central and State Ministries/Departments have not undertaken such exercise in the past and may not have trained personnel to do this task. It is necessary that BIS builds their capacity and provides adequate handholding through training of the key personnel.

2.4 Academic Institutions – Academic institutions play a crucial role in the formulation of standards in several ways. Academics conduct research and development in various fields, leading to the creation of new technologies and innovations. These advancements can be the basis for new standards to be developed. Academics bring specialized knowledge and expertise to the standards development process. They can contribute to the development of technical specifications and help ensure that standards are based on the latest research and best practices. Academia also plays a role in educating and raising awareness about standards and their importance among students, researchers, and the broader public.

BIS has signed Memorandums of Understanding (MoUs) with the institutes of eminence for collaboration in the field of standardization and conformity assessment, co-operation in R&D including setting up of research infrastructure. It would strengthen and enhance the standards formulation activity by facilitating Research & Development projects, encouraging involvement of young minds in the area of standardization process and jointly organizing seminars, conferences, workshops symposia or lectures, training and short-term education programs. It will also help in bridging the gap between research and development and commercialization to ensure that new advancements are in line with industry standards.

Providing training to the experts from academia will ensure that they have a clear understanding of the standards and procedures involved in the development and maintenance of the standards and will imbibe the knowledge and skills necessary to effectively participate in the development and implementation of these standards, for contributing to the overall quality and credibility of the standards.

2.5 Technical Committee Members - Technical Committee members as well as those actively contributing to standardization from outside should have a clear understanding of the standardization processes (national and international) and their underlying principles such as openness, transparency, impartiality and consensus, effectiveness and relevance, coherence and performance-based standards. In addition, those involved in drafting of standards should be equipped with necessary knowledge and be conversant with the norms on drafting standards covering the form, format, language and presentation of a standard. All the above, would enable the generation of interest in standardization amongst stakeholders and active involvement, and in effective participation of committee members and other stakeholders thereby bringing excellence in the standardization work. BIS would work on various capacity building measures to achieve the above objectives such as Providing training to existing technical committee members; Ensure induction training of newly appointed technical committee members; Provide training to committee leadership on their roles and responsibilities; Conduct training programmes for Chairs, Conveners and Experts of international technical committees and arm them with necessary skill sets etc.

2.6 International Trainees - Standardization is important for promoting economic development, improving quality and safety of products and services, and facilitating trade between countries. However, many developing countries lack the infrastructure, resources, and expertise to develop and implement standards effectively. International training programs on standardization and quality can help bridge this gap by providing participants with the knowledge, skills, and tools needed to develop and adopt standards that are relevant to their specific needs and contexts

3 OBJECTIVES

The objective of the Annual Training Plan is to establish a documented system model for:

a) Providing training to the identified external and internal stakeholders of BIS
b) Identification of training needs including gap analysis of the Stakeholders
c) Providing need based, work oriented or specialized bespoke trainings solutions
d) Designing and developing training modules for the various training programmes as per the requirement
e) Developing mechanisms for evaluation of effectiveness of training
f) Continual improvement of the Training designs and materials based on the evaluation
g) Creating pool of Faculty/Resource Person for various training programmes
h) Assessing efficacy of training and/or training modules based on the feedback.
i) Widely publicizing the trainings conducted by BIS to have maximum participation of stakeholders.

4 TRAINING SETUP OF BIS

National Institute of Training for Standardization (NITS)

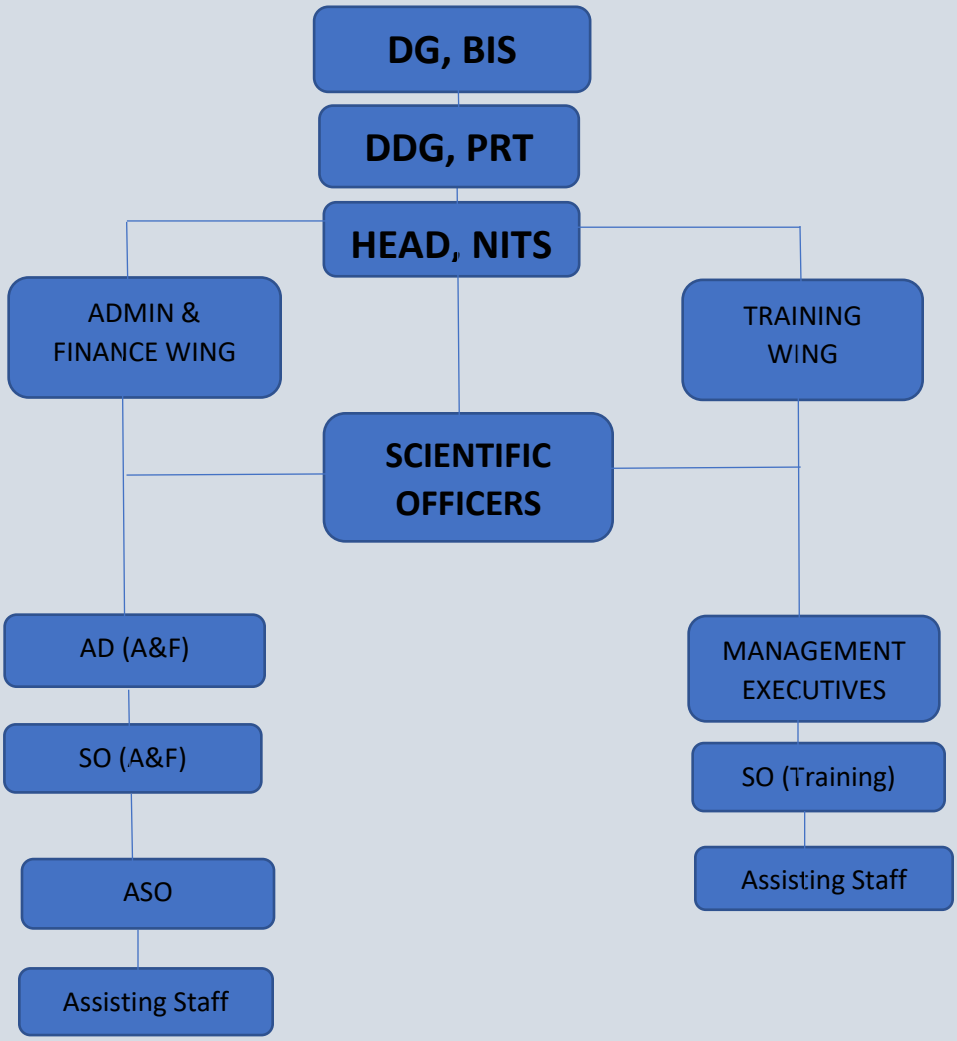
4.1 A dedicated training institute, the National Institute of Training for Standardization (NITS) was established by BIS in 1995, to meet the growing needs and expectations of the industry for quality training in the fields of standardization, quality assurance, management systems, certification, laboratory testing, etc. Since then, NITS has been organizing various types of training programmes for industry, Central/state Govt. bodies, consumer bodies as well as for its own employees. NITS is one of the training institutes identified by Ministry of External Affairs, Govt. of India under Special Commonwealth African Assistance Programme (SCAAP), Indian Technical and Economic Cooperation (ITEC), Colombo Plan (CP) for developing countries. NITS has been conducting these programmes for developing countries of Asia, Africa, Europe and Latin America every year since its inception.

4.2 Keeping in view its expanding activities, a separate training complex was created as NITS, which started functioning from its new premises in Noida from May 2003. Training facilities include state of the art computer laboratory, well equipped training halls of different capacities with modern audio-visual facilities, auditorium, library and wi-fi enabled campus. It has a hostel with well furnished rooms and facilities for laundry, dining, post training hour recreational facilities including air-conditioned gym.

4.3 NITS conducts a large variety of programmes on various subjects at its facilities in Noida campus as well as at its training centers in Chennai, Kolkata, Mumbai, Bangalore, Bhopal, Hyderabad and Jaipur. NITS also conducts programmes ONLINE. These programmes form part of NITS Annual Training Calendar and identified as '**On-Campus Programmes'**. Such programmes are open to participation by any interested stakeholder either individually or through nomination by their respective organisations or registering as an individual. On many occasions, NITS client organizations require training courses customised for their officers/staff and conducted at their premises/online. NITS cater to these requirements by imparting the training at the premises of the clients on request. Such customized programmes conducted on specific request of client organizations at their premises/online are called as '**Off-Campus Programmes'**.

4.4 NITS over the years has acquired the reputation of being the leading institute in the country offering trainings in the field of standardization, conformity assessment and quality. NITS has served various organizations from Ministries/Departments of Govt of India and State Govts, PSUs, private organizations, consumer organizations as well as individual professionals. With the stalling of physical training activity as a result of the Covid 19 pandemic, NITS smoothly transitioned towards organizing online courses which were quite popular and were greatly appreciated. So far NITS has trained more than 10,000 professionals in various areas of standardization, product testing, management systems, laboratory systems and control and consumer awareness.

4.5 NITS Organizational Structure



5. APPROACH & METHODOLOGY

5.1 NITS has developed a systematic approach to training based on the Plan-Do-Check-Act (PDCA) model for continual improvement of training processes for imparting consistent, efficient and enhanced trainings for accomplishing organizational goals. It involves following steps:

a) Analysis and Identification: In this phase, training needs are identified i.e. who needs training, what do they need to learn and estimating training cost, etc. to design bespoke training solutions.

b) Designing and Developing: In this phase we develop objectives of training, identify the learning steps, sequence & structures the contents and baselines the performance measure This phase also involves defining pedagogy, selecting delivery method, developing the training material and validating information to be imparted to make sure it accomplishes all the goals and objectives.

c) Implementation: NITS shall be putting the training into practice with the defined plan.

d) Evaluation: Each phase of the trainings shall be evaluated through feedbacks, assessments, follow ups, etc., so as to make sure it has achieved its aim in terms of subsequent work performance and recommend necessary amendments for continual improvement of the training solutions.

5.2 Analysis and Identification

5.2.1 The first step of the training strategy is to identify the target groups and assess their training needs of the stakeholders. For this purpose, a **Coordination and Monitoring Committee (CMC)** shall be constituted for Training Needs Analysis and Identification with following members:

a) DDG(Policy, Research and Training) - Chairperson
b) DDG (Certification)
c) DDG (Standardization –I)
d) DDG (Laboratory)
e) DDG (Management Systems Certification)
f) DDG (Hallmarking)
g) H(NITS) – Member Secretary

5.2.2 The Coordination Committee shall analyse and assess the training needs of the stakeholders to design bespoke training solutions. The requests received from other Organizations shall also be considered.

5.2.3 The Coordination and Monitoring Committee, based on the training need analysis of BIS, its employees, Industries, Consumers and other stakeholders shall develop Training Calendar for the Financial Year, which will be put up to DG, BIS for approval.

5.3 Designing and Developing

5.3.1 Designing and Developing are important component of systematic approach to training. Designing involves enlisting active participation of the personnel at varying levels, defining the objectives, identifying the resource persons and selecting appropriate methods and techniques for training. Developing the content involves defining the learning steps, sequencing & structuring the contents. The training content must be tailored to the specific duties, roles and responsibilities of the trainees in a particular group to achieve the purpose of training effectively and efficiently.

5.3.2 Content Development Committees (CDC)

Content Development Committees shall be constituted for NITS interventions and deliverables, as required, for designing and development of their content and course material. CDCs shall be constituted by NITS (with approval of DDG(PRT)) and will typically comprise of Subject Matter Experts (SMEs) from BIS, Industries and other relevant organizations.

5.3.3 Delivery Modes

5.3.3.1 The training programmes would be conducted in the following delivery modes:

a) On - Campus Training Programmes: These Programmes are open to participation by the identified stakeholder group and are delivered at NITS, Noida or any other premises chosen by NITS. These trainings are planned at the starting of each Financial Year and are scheduled in Training Calendar.

b) Off- Campus Training Programmes: Customized training programmes for a specific client Organisation (PSUs/Industries etc.,) at their location.

c) Online Training Programmes: Both On-Campus and Off- Campus training Programmes can be delivered online.

d) E-learning Mode: e-learning provides unparalleled opportunities for meeting the training needs for stakeholders across the country. Technology provides the means to make a vast resource of learning material, online courses and webinars, etc., available readily, providing individuals with enormous choice & flexibility in learning.

e) Blended Learning Approach: Blended learning is an approach that combines online learning including virtual classrooms, with traditional place-based classroom methods through opportunities for interaction(s) online. Audio-visual educational material would be developed by BIS for blended learning.

5.4 Implementation

NITS shall be putting the training into practice with the defined plan.

5.5 Training Evaluation

The objective of training evaluation is to enhance the training programmes by building on the strengths, by removing the shortcomings (if any). The method of evaluating the effectiveness of

training programmes shall be based on the concept that it is the "process" (and not "outcome") of training, which is to be evaluated for its effectiveness, in order to ensure the effectiveness of the training programmes. The "P3 Model" model shall be used which includes evaluation of three different phases of training, i.e. "Pre-training phase", "Pro-training phase" and the "Post-training phase" to assess the quality of the training and to ensure that the training objectives were met. Accordingly, following tools shall be used for the evaluation at these phases:

a) Pre- training assessments : Pre - assessment shall be conducted before the training begins to measure the participants' knowledge, skills, and abilities related to the training topic. It can be done through questionnaires, quizzes and workshops. It shall be used to identify the participants' strengths and weaknesses, and to tailor the training program to meet their needs. They also provide a baseline against which the participants' progress can be measured.

b) Pro-assessment: This assessment shall be conducted during the training program to measure the participants' understanding of the training material as it is being presented. This can be done through assessing the participation of the trainee in workshops, quizzes and role plays etc. It is used to provide feedback to the trainers and to the participants, and to identify areas where additional clarification or support is needed.

c) Post-assessment: This is an assessment conducted after the training program to measure the participants' knowledge, skills, and abilities related to the training topic. Post-assessments are used to evaluate the effectiveness of the training program and to measure the participants' progress. It can be done through Assessment, feedback and follow -up. Assessments may be conducted immediately after the training. The performance of the participants in these assessments indicates the learning gained by the participants. Feedback on content, resource persons, comprehension, engagement, etc of the training shall be obtained at the end of the training through feedback forms, emails, etc. Suggestions may also be sought from the participants. Provision of uploading video testimonials by the participants may also be given on the portal. Follow up may be done with the trainees to ensure that the training program has been effective in achieving its goals.

5.5.1 The overall Training Effectiveness evaluation would depend on the proposition, "A high score on the effectiveness of pre-training factors, pro-training factors and post-training factors jointly, will lead to the effectiveness of the training programmes."

5.5.2 The Coordination and Monitoring Committee shall review the training modules (including faculty) with respect to the following parameters on the basis of the evaluation done at the end of each financial year, so as to make sure it has achieved its aim and recommend necessary amendments for continual improvement of the trainings.

a) Relevancy of the content
b) Resource Persons
c) Frequency of the course
d) Participation

5.6 Communication, Promotion & Marketing of Training Programmes

5.6.1 Once the training programme and modules have been developed, the next important step is to publicize it among the stakeholders. The promotion and marketing of the training courses offered may be done through email, social media, telephone, bulk messages, website etc.

5.6.2 A dedicated Communication and PR team at NITS will be in regular interaction with the prominent industry associations, organisations, Realtors, State Government Departments, Municipal Departments, etc for marketing and publicity of the trainings. Testimonials of the participants from reputed organisations may also be hosted on the website, social media, etc.

5.7 Creating the Expert Pool

5.7.1 A pool of experts will be created to be utilized as faculty for various training programmes. With a focus on exponential learning, it is also planned to develop training modules for use of resource personnel for imparting training in a uniform manner whether through classroom method or online mechanisms, for facilitating delivery of superior training experience to audience at one or multiple locations.

5.7.2 Although BIS has core competence in providing training on standardization and conformity assessment, it is desirable to enlarge the pool of experts or collaborate with institution having such expertise for providing training in areas such as soft skills, GFR and finance related issues, e-procurement, establishment and secretatrial matters etc. Accordingly, BIS shall enter into strategic alliances with premier training institutes to fill this gap area, to enhance its pool of experts.

5.8 Calibration of Trainers

Meetings may be conducted of the Trainers with the trainers of peer organisations conducting similar trainings for improving the quality of training delivery, standardizing training practices, and promoting professional development and networking among trainers. By coming together to share their experiences and expertise, trainers can contribute to the growth and development of the training solutions.

5.9 Peer Evaluation

5.9.1 The officials from NITS may get the training from peer organisations to assess the quality of its training and gain insights into best practices, learn new training techniques, and compare the quality of training offered by NITS with that of theirs. NITS shall research and identify training institutes that offer similar training programs and look for institutes that have a good reputation and track record in delivering quality training. Officers may be deputed to attend these Training Programs offered by these institutes to gain first hand experience of their training delivery and methods to take note of the strengths and weaknesses of the training programs and compare them with the training programs offered by NITS. Based on the analyses, NITS shall identify areas for improvement in training programs and implement changes to improve the quality of training delivery.

5.9.2 Relationship may be established and maintained with the peer training institutes and other training professionals to continue learning and exchanging best practices and build a network of training professionals and contribute to the overall growth and development of the training industry.

5.10 Training Portal

Under the initiative of e-BIS, a training module has been developed covering all the processes of training including user and faculty interfaces. It would facilitate efficient response for training needs of BIS employees as well as external stakeholders, creation of a comprehensive database of trainees, trainers, course materials, case studies, etc. Any interested person/ organisation would be able to propose and apply for training programmes through this portal.

5.11 Budget & Finance

BIS would allocate adequate funds to training & development activities for meeting the stipulated training requirement. BIS as a progressive organization and model employer accepts and appreciates that "Expenditure is not what it costs to train, but what it costs not to train". Thus, the financial commitment towards realization of tenets of training action plan shall be treated as investment rather than expenditure.

5.12 Interventions and Deliverables

5.12.1 Capsule Courses

- Capsule course on the National Building Code of India (NBC) - 2016
- Capsule course on national electrical code of India (NEC)
- Product Specific Capsule courses for the Quality Control Personnel for Industries and Licensees
- Capsule courses on important Codes of practices, Guidelines and Systems Standards
- Capsule Courses on Test Methods of Important Standards.

5.12.2 Training Programme for Standardization Cells & Technical Committee Members

- Capacity-building of the members of Standardization Cells of Industry Associations.
- Training of division council and technical committee members.
- Training of the professionals representing country in TCs of ISO and IEC.

5.12.3 Training Programmes for Science Teachers Faculties of Technical Institutions and Students

- Training of Science Teachers as a part of Learning Science via Standards.
- Week-long Summer Vacation programmes on Learning Science via Standards for students.
- Training programmes for the faculty of engineering and professional colleges.
  +

5.12.4 Management system programmes

- Lead Auditor Courses for various Management Systems, such as Quality Management Systems as per IS/ISO 9001:2015, Occupational Health Management Systems as per IS/ISO 45001:2018, Environmental Management Systems as per IS/ISO 14001: 2015, Food Safety Management Systems as per IS/ISO 22000: 2018 etc.

5.12.5 Laboratory Training programmes

- Laboratory Quality Management System and Internal Audit as per IS/ISO/IEC 17025:2017
- Medical Laboratories Quality Systems and Internal Audit as per IS/ISO 15189:2022
- Measurement Uncertainty (MU)
- Inter Lab Comparison, Proficiency Testing and Evaluation of Scores (ILC,PT)

5.12.6 Certificate courses

- Certificate Courses on Assaying and Hallmarking
- Certificate Courses for Quality Control Personnel

5.12.7 International outreach

- ITP on Management Systems
- ITP on Standardization and Conformity Assessment
- ITP on Laboratory Quality Management System
- Customized Trainings for other NSBs

5.12.8 Outreach Training Programmes

- Orientation Programme for the officers of Police, Customs, CPMFs, railways, PSUs and other such organisations.
- Training Programmes for the professionals of other countries.
- Training Programmes for Central & State Govt. Departments/ Regulators/ Procurement agencies, for guiding them in use of Standards in govt. policies/ procurements/ regulations.
- Training Programmes for Municipal Corporations
- Training Programmes for the Resident Welfare Associations (RWAs) and NGOs

5.12.9 For BIS Employees

- Induction Level Training
- Refresher Courses
- Training on Project Management
- Training on Time Management
- Training on Quality Management
- Leadership Programme for Senior Management
- Training on Administrative and Financial Matters
- Lead Auditor Courses for various Management Systems

6. CAPSULE COURSE ON NATIONAL BUILDING CODE OF INDIA 2016 (NBC 2016)

6.1 Introduction

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.

6.2 Objectives

a) 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.

b) Making participants skilled enough to be achieving proficiency in building design and construction including matters relating to quality, safety and accessibility.

6.3 Course Structure

Sl No.	Name of the Course	Duration	Topics Covered
1	Capsule Course on Accessibility in Buildings and Built Environment	2 Days	• Introduction and Awareness Raising • Access for All – Legal and Policy Framework • Introduction to National Building Code of India 2016, Applicability, Scope, Terminology • Universal Design • Anthropometrics • Accessible Parking • Approach to the Building and Building Entrances • Internal Circulation • Level Changes/Vertical Circulation • Elevators/Lifts - Design Considerations • Sanitary Facilities • Tactile Ground Surface Indicators • Signage • Retrofitting in Existing Buildings
2	Capsule course on Fire and Life Safety	2 Days	• Introduction and Overview of NBC 2016 • Fire Prevention • Life Safety • Fire Protection • Additional Occupancy-wise Requirements • Special Requirements for High Rise Buildings, Atrium, Commercial Buildings and Car Parking Facilities • Special Occupancies (Hospitals, Malls and Multiplexes, Datacentres) • Metro Trainways and Metro Stations • Case Studies
3	Capsule course on Structural Design	3 Days	• Introduction and Overview of NBC 2016 • Plain, Reinforced and Prestressed Concrete • Prefabricated Concrete • Masonry • Timber and Bamboo

Sl No.	Name of the Course	Duration	Topics Covered
			• Discussions on Defects in Construction Leading to Adverse Impact on Structural Performance • Steel Design • Glass and Glazing • Soil and Foundation
4	Capsule Course on Soil and Foundation Engineering	2 Days	• Introduction and Overview of NBC 2016 • Sub-surface Investigation • Shallow Foundations • Deep Foundations • Ground Improvement • Case Studies • Special Projects – Experiences and Learnings
5	Capsule Course on Air Conditioning, Heating and Mechanical Ventilation	2 Days	• Introduction and Overview of NBC 2016 • Planning and Design for HVAC system • Selection of Air Conditioning Products and System Based on Design Considerations • Installation, Commissioning and Operation and Maintenance • Sustainability and Performance Validation • Specialized HVAC System
6	Capsule Course on Plumbing Services	2 Days	• Introduction and Overview of NBC 2016 • Water Supply • Drainage • Gas Supply • Solid Waste Management • Water Efficient Plumbing Products • Case Studies • Special Projects – Experiences and Learnings

6.4 Target Participants

All those concerned with city planning, building regulation, and planning, design, construction and maintenance of buildings and built assets and facilities. Initially officers of BIS from Civil Discipline shall also be trained to use them further as faculty.

6.5 Frequency and Batch Size

No of Programmes in a year– 18 (6 Courses x 3 per year) with batch size 20 (Min) - 40 (Max) participants

6.6 Content Development Committee

6.6.1 The Content development Committee for each of the above Courses shall constitute of following members:

a) 01 Representative from CED
b) 02 Representatives from Industry nominated by CED
c) 01 Representative from NITS

6.7 Resource Person / Faculty

Competent personnel from Industry, academia, professional, overseas experts and BIS.

6.8 Training Methodology

a) Interactive Classroom Sessions.
b) Workshops and Case Studies.

6.9 Continual Improvement

The Coordination Committee shall evaluate each phase of the trainings through feedbacks, assessments, follow ups, etc, so as to make sure it has achieved its aim in terms of subsequent work performance and recommend necessary amendments for continual improvement of the training solutions

6.10 Communication - Promotion & Marketing

E-Mails and Letters to 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.

7. Capsule Course on National Electrical Code of India 2023 (SP 30)

7.1 Introduction

7.1.1 National Electrical Code of India (SP 30) is a prestigious publication of Bureau of Indian Standards (BIS) which is widely used by the various stakeholders, such as electrical engineers of State Electrical Inspectorate, Central & State Public Works Dept., State Electricity Board, Municipal Authorities, Distribution Companies, Fire Dept., Electrical Consultants, Electrical Contractors, Developers & Builders (Electrical Engineers), Architects, Railways and Industry Stakeholders, academic institutions and R&D organizations.

7.1.2 National Electrical Code of India is a comprehensive document covering standard good practices for selection of various items of electrical equipment, electrical installations in buildings for different occupancies and, additional precautions to be taken for use of electrical equipment for special environmental conditions like explosive and active atmosphere, and solar photovoltaic power systems. Reference to NEC is also given in Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010.

7.1.3 The country is on the path of rapid urbanization and development. Considering the importance of the Code in ensuring quality and safety of the electrical installations, it is important that various stakeholders contributing to planning, design, installations and testing of electrical installations are well aware of the provisions of NEC for its judicious implementation. 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 planned to conduct the short-term course on National Electrical Code of India for national capacity building.

7.2 Objectives

7.2.1 To spread awareness of the National Electrical Code of India and to ensure proper interpretation of the standards.

7.2.2 Bridging the competence gap in the skills of personnel currently involved & working with the public works departments and other construction agencies dealing with design and erection of Electrical Installations.

7.2.3 Making participants skilled enough to be achieving quality as per prescribed standards.

7.3 Course Structure

a) Overview of Standards on Electrical Safety
b) Importance of National Electrical Code of India
c) Overview of Electricity Act, CEA regulations and correlating role of Standards and Code
d) Understanding stages of electrical work, stakeholders, and their respective role.
e) Designing layouts, drawings, load assessment, designing distribution, SLDs.
f) Protection for Safety - electric shock, thermal effect (fire due to short circuit), over current & short circuit, over voltages, EMI, Lightning protection and Surge protection

g) Selection and erection of equipment - Wiring system, conductor, cross-section, insulation, Isolation, switching, control.
h) System earthing - Earthing arrangement Safety in each network, Equipment earthing, Earthing of DG, UPS, electronic equipment
i) Protective Equipotential Bonding and Protective conductors
j) Verification and testing - Inspection during construction and after completion
k) Statutory provisions – Act, Rules, Regulations, role of CEA, Electrical Inspectors
l) Standby Generation stations, Transformer sub-stations, Electrical Installations in Special Locations

7.4 Target Participants

7.4.1 Electrical Engineers of all key sectors such as:

a) State Chief Electrical Inspectorate
b) Central & State Public Works Dept and Railways
c) State Electricity Board, Municipal Authorities, Fire Dept, Railways, RERA
d) Distribution Companies and Industry Stakeholders
e) Consultants, Contractors, Developers, Builders and Architects.

7.5 Frequency and Batch Size

No of Programmes in a year – 4, duration 2 days, with batch size 20 (Min) - 40 (Max) participants

7.6 Content Development Committee

a) 01 Representative from ETD
b) 02 Representatives from Industry nominated by ETD
c) 01 Representative from NITS

7.7 Resource Person / Faculty

Competent personnel from BIS, Industry, academia, professional and overseas experts.

7.8 Training Methodology

a) Interactive Classroom Sessions.
b) Workshops and Case Studies.

7.9 Continual Improvement

The Coordination Committee shall evaluate each phase of the trainings through feedbacks, assessments, follow ups, etc, so as to make sure it has achieved its aim in terms of subsequent work performance and recommend necessary amendments for continual improvement of the training solutions

7.10 Communication - Promotion & Marketing

E-Mails and Letters to State Electrical Inspectorate, Central & State Public Works Dept., State Electricity Board, Municipal Authorities, Distribution Companies, Fire Dept., Electrical Consultants, Electrical Contractors, Developers & Builders (Electrical Engineers), Architects, Railways and Industry Stakeholders, academic institutions and R&D organizations.

8. Training Programme for Members of Division Councils, Technical Committees and Experts in National/International Committees

8.1 Introduction

8.1.1 Standards formulation process at BIS is carried out through Technical Committees functioning under 16 Division Councils of BIS.

8.1.2 There is need to sensitize the Members of Division Councils, Technical Committees and Experts in National/International Committees and to orient them towards the processes and procedures of BIS to function efficiently and in an effective manner.

8.2 Objectives

a) To orient the members towards the processes and procedures of BIS for Standard Formulation activity.

b) To train them for their role in the process of standard formulation.

8.3 Course Structure

a) Basic Concepts of Standardization - Aims, Principles, Levels of Standardization and Standards Eco-system and other relevant aspects
b) An Overview of BIS Standardization Initiatives, SFM, SNAP & Strategic Roadmap
c) Standards Formulation Process – Stages of Work and Stakeholders engagement
d) Structure and Composition of Technical Committees
e) Function of Technical Committees and Participation in sectional committee meetings
f) Appointment of Chairman/Convenors and Nomination of members
g) Responsibilities of Chairman and Members
h) Review of standards – Revision, Amendment, Reaffirmation, Withdrawals, supersession, Concurrent running
i) Action Research Based Approach for review of standards
j) Role in carrying out review and revision of standards
k) Standardization Portal: Features and Role of Standardization cell Members (proposfals for new subjects, submission of comments, accessing documents, ARPs etc.)
l) Experience Sharing of Good practices by Standardization cells
m) Hands on workshop on Standards Formulation
n) International Standardization and Participation in International Standardization Work (International Standardization Process, NWIP)
o) WTO-TBT Enquiry point; Bilateral and Regional Co-operations (MRA's), Domestic & International Trade Practices; Trade Facilitation International Standardization Procedures
p) Nomination & Roles and Responsibilities of Experts

q) Harmonization with International Standards, Adoption of ISO/IEC Standards &ISO/IEC Guide 21
r) BIS experience in International Standardization Handling of Secretariat TC's at ISO/IEC
s) Drafting of Indian Standards as per IS 12
t) Role of Standards w.r.t SDGs & Climate Change

8.4 Target Participants

Members of Division Councils, Technical Committees and Experts in National/International Committees

8.5 Frequency and Batch Size

No of Programmes in a year – **5 for** Members of Division Councils, Technical Committees and **2** for Chairs/Convenors/Experts in International Committees**,** duration of 2 days with batch size 20 (Min) - 40 (Max) participants

8.6 Content Development Committee

a) 01 Representative from SCMD
b) 02 Representatives from Standards Formulating Department nominated by SCMD depending on the industry)
c) 01 Representative from NITS

8.7 Resource Person / Faculty

Competent personnel from BIS and Industry.

8.8 Training Methodology

a) Interactive Classroom Sessions.
b) Workshops and Case Studies.

8.9 Communication - Promotion & Marketing

E-Mails and Letters to Members of Division Councils, Technical Committees and Experts in National/International Committees in co-ordination with SCMD

9. Training Programme for Standardization Cells of Government Departments Officials, SDOs and Industry Associations

9.1 Introduction

9.1.1 BIS has formulated more than twenty-one thousand standards. If one goes by the number of the product standards under the Conformity Assessment Schemes, less than one percent have been adopted by the industry. Actual percentage may be slightly higher because of the fact that many of the standards are followed because of their mention in the government regulations without being covered under a Conformity Assessment Scheme.

9.1.2 The Government Departments and Industry Associations can play a leading role in the process of standard formulation and it starts from identification of the areas for standard formulation to the implementation of the standards after they have been published. The proactive role Industry Associations or large industries can play in standard formulation becomes clearer when we look at the practices followed in other countries. Standardization Cells in other Standards Developing Organizations (SDOs) may provide vital inputs for standardization in emerging areas.

9.1.3 The standardization Cells formed by Government Departments and Industry Associations are expected to engage and contribute effectively in various activities of standard formulation such as identification of new product standards, review & revision of existing standards, implementation of standards, Action Research Projects (ARPs) etc. However, it was observed that Standardization Cells are not very clear about their role in development and implementation of standards. Thus, there is need to sensitize the members of Standardization Cells and to orient them towards the processes and procedures of BIS for these Standardization Cells to function efficiently and in an effective manner.

9.2 Objectives

a) To sensitize the members of Standardization Cells and to orient them towards the processes and procedures of BIS for these Standardization Cells to function efficiently and in an effective manner.
b) To train the members of Standardization Cells for their role in the process of standard formulation.

9.3 Course Structure

a) Basic Concepts of Standardization - Aims, Principles, Levels of Standardization and Standards Eco-system and other relevant aspects
b) An Overview of BIS Standardization Initiatives, SFM, SNAP & Strategic Roadmap
c) Standardization cells - Purpose & Expectations
d) Standards Formulation Process – Stages of Work and Stakeholders engagement
e) Structure and Composition of Technical Committees

f) Function of Technical Committees and Participation in sectional committee meetings
g) Appointment of Chairman/Convenors and Nomination of members
h) Responsibilities of Chairman and Members
i) Review of standards – Revision, Amendment, Reaffirmation, Withdrawals, supersession, Concurrent running
j) Action Research Based Approach for review of standards
k) Role in carrying out review and revision of standards
l) Standardization Portal: Features and Role of Standardization cell Members
    a. (proposals for new subjects, submission of comments, accessing documents, ARPs etc.)
m) Experience Sharing of Good practices by Standardization cells
n) Hands on workshop on Standards Formulation
o) International Standardization and Participation in International Standardization Work (International Standardization Process, NWIP)
p) WTO-TBT Enquiry point; Bilateral and Regional Co-operations (MRA's), Domestic & International Trade Practices; Trade Facilitation International Standardization Procedures
q) Nomination & Roles and Responsibilities of Experts
r) Harmonization with International Standards, Adoption of ISO/IEC Standards &ISO/IEC Guide 21
s) BIS experience in International Standardization Handling of Secretariat TC's at ISO/IEC
t) Drafting of Indian Standards as per IS 12
u) Role of Standards w.r.t SDGs & Climate Change

9.4 Target Participants

Members of Standardization Cells of Government Departments and Industry Associations

9.5 Frequency and Batch Size

No of Programmes in a year – 5 for Government Departments , 5 for Industry Associations and 2 for SDOs**,** duration of 2 days with batch size 20 (Min) - 40 (Max) participants

9.6 Content Development Committee

a) 01 Representative from SCMD
b) 02 Representatives from Standards Formulating Department nominated by SCMD depending on the industry)
c) 01 Representative from NITS

9.7 Resource Person / Faculty

Competent personnel from BIS and Industry.

9.8 Training Methodology

a) Interactive Classroom Sessions.
b) Workshops and Case Studies.

9.9 Communication - Promotion & Marketing

a) E-Mails and Letters to Members of Standardization Cells
b) Regular Interaction with the Government Departments and Industry Associations.

10 Outreach Training Programme for Orientation of the officials of Central and State Govt. departments, Police, PHE, PWD, Irrigation, CAPF, PSUs etc

10.1 Introduction

With increased emphasis on quality goods and continuous issue of Quality Control Orders by Govt of India, there is a need to sensitize the officials of Government Departments, PSUs etc regarding standards related to their activity and role of BIS in standardization and conformity assessment.

10.2 Objectives

a) To sensitize the officials of Govt departments/PSUs about BIS activities
b) To train the officials in area of sector specific standards

10.3 Course Structure

a) Basic Concepts of Standardization - Aims, Principles, Levels of Standardization and Standards Eco-system and other relevant aspects
b) An Overview of BIS Standardization Initiatives, SFM, SNAP & Strategic Roadmap
c) Standardization cells - Purpose & Expectations
d) Standards Formulation Process – Stages of Work and Stakeholders engagement
e) Structure and Composition of Technical Committees
f) Function of Technical Committees and Participation in sectional committee meetings
g) Review of standards – Revision, Amendment, Reaffirmation, Withdrawals, supersession, Concurrent running
h) Action Research Based Approach for review of standards
i) Role in carrying out review and revision of standards
j) Standardization Portal: Features and Role of Standardization cell Members
    a. (Proposals for new subjects, submission of comments, accessing documents, ARPs etc.)
k) Experience Sharing of Good practices by Standardization cells
l) Hands on workshop on Standards Formulation
m) Role of Standards w.r.t SDGs & Climate Change
n) Department related standards
o) Conformity Assessment Schemes and QCOs

10.4 Target Participants

Officials of respective Government Departments/PSUs

10.5 Frequency and Batch Size

No of Programmes in a year – 1 for each Government Departments/PSU identified, duration of 2 days with batch size 20 (Min) - 40 (Max) participants

10.6 Content Development Committee

d) 01 Representative from TNMD & CMD-I
e) 01 Representatives from Standards Formulating Department nominated by SCMD depending on the department)
f) 01 Representative from NITS

10.7 Resource Person / Faculty

Competent personnel from BIS.

10.8 Training Methodology

a) Interactive Classroom Sessions.
b) Workshops and Case Studies.

10.9 Communication - Promotion & Marketing

a) E-Mails and Letters to respective departments
b) Regular Interaction with the departments

11 Capsule Course for Quality Control Personnel of Industries & Licensees and testing personnel of Labs

11.1 Introduction

11.1.1 Bureau of Indian Standards (BIS) being the National Standards Body of the country discharges multitude of functions and services for enhancing the quality ecosystem in the Country. The activities of BIS include standards formulation at national and international level, conformity assessment schemes (Product Certification, Systems Certification, Registration and Hallmarking) testing and training. All these activities are carried out through their network of headquarters, regional and branch office and labs spread throughout the country.

11.1.2 Lack of technical expertise of the Quality Control Personnel has been pointed out as one of the constraints faced by the Industry while obtaining/operating BIS licenses. This gap is increasing with many new products coming under mandatory BIS certification. In order to bridge this gap, National Institute of Training for Standardization (NITS), the training arm of BIS has planned to conduct short term Capsule Courses (2-days) for Quality control personnel through BIS Branch Offices across India.

11.1.3 The courses on products will be conducted for Quality control personnel of industries in specific products like Packaged Drinking Water, Electric Cables & Conductors, Steel products, Pipes & Pipe Fittings, Skimmed Milk Powder, Domestic Appliances, Pumps & Motors, Toys, Textile Products, Cement & related Products, Plywood, etc. based on the concentration of industry in the area where the course is being conducted. These programmes will not only facilitate compliance to Indian Standards but also contribute to the national capacity building leading to enhanced Quality Ecosystem in the country. The courses on test methods will be conducted for testing personnel in industries as well as in labs

11.2 Learning Objectives

a) Bridging the competence gap in the skills of Quality Control and Testing Personnel.
b) Making participants skilled enough to be achieving quality as per prescribed standards.

11.3 Course Structure

a) Understanding requirements of related Indian Standards.
b) Discussion on testing parameters including Sample Preparation and conditioning of samples.
c) Explanation of product manual / SIT / any specific guidelines and record keeping.
d) Understanding guidelines for grant/inclusion/renewal/operation of licenses.
e) Features of ManakOnline & other BIS e-portals.
f) Exercises and Workshops on above topics.
g) Lab Visit for practical demonstration of testing of important/critical parameters.

11.4 Target participants

Quality Control and Testing Personnel of relevant industry and labs.

11.5 Frequency and Batch Size

No of Programmes in a year – 4 on products & 4 on test methods per BO per year, duration of 2 days with batch size 20 (Min) - 40 (Max) participants

11.6 Content Development Committee

a) 01 Representative from concerned CMD (nominated by CMD1)
b) 01 Representative from BIS Lab (nominated by LPPD)
c) 01 Representatives from Industry (nominated by CMD1)
d) 01 Representative from NITS

11.7 Resource Person / Faculty

Competent personnel from BIS and Industry.

11.8 Training Methodology

Classroom based with combination of lectures, presentations, videos, case studies and interactive workshops.

11.9 Continual Improvement

The Coordination Committee shall evaluate each phase of the trainings through feedbacks, assessments, follow ups, etc, so as to make sure it has achieved its aim in terms of subsequent work performance and recommend necessary amendments for continual improvement of the training solutions.

11.10 Communication - Promotion & Marketing

E-Mails and Letters to Licensees and Industry associations.

12 Certificate Course on Assaying & Hallmarking

12.1 Introduction

Bureau of Indian Standards (BIS) operates the BIS Hallmarking Scheme for Gold and Silver Jewellery / Artefacts. Hallmarking provides third party assurance on purity or fineness of Jewellery / artefacts marked. As per this Scheme, registration is granted t the jewelers to sell hallmarked Jewellery. Such registered jewellers can get their Jewellery hallmarked from any of the BIS recognized Assaying ad Hallmarking Centers where the Jewellery / artefacts are tested to check their declared purity or fineness. Only such Jewellery / artefacts which are found conforming are hallmarked through laser marking.

As per Hallmarking of Gold Jewellery and Gold Artefacts Order, 2020 issued by the Government of India vide S. O. no. 205 (E) dated 15 -01-2020, Hallmarking of gold Jewellery and artefacts (weighing 2 gm and above) will become mandatory from 01 June 2021.

The Assaying and Hallmarking Centers employ testing personnel for performing the assay (testing of purity of precious metal) and therefore the competence of testing personnel has a direct bearing on the reliability of the Hallmark. With the implementation of the above Order, the demand for competent testing personnel for assaying is expected to increase exponentially.

12.2 Learning Objectives

a) Bridging the competence gap in the skills of Assaying and Hallmarking personnel.
b) Making participants skilled enough to be employed as Assaying & Hallmarking Personnel in Assaying & Hallmarking Centers.

12.3 Course Structure

a) Introduction to Indian Standards on Gold & Silver, BIS Act & Rules
b) Introduction to BIS Hallmarking Scheme
c) BIS (Hallmarking Regulations), Guidelines, other Regulatory Requirements and Laboratory good practices
d) The Hallmarking Regulations, Chapter I, II & III
e) Introduction to Indian standard on Precious metals, IS 2112, 2113,1417, 1418
f) Introduction to Indian standard on Delivery Bar, IS 17278
g) Indian Standard for AHCs, IS 15820-All Organizational, Managerial and Technical Requirements
h) Guidelines for Recognition & Operation of Assaying & Hallmarking Centres, Grant of Registration to Jewellers and Guidelines for Grant of Licence to Refineries
i) Good Laboratory Practices and Basic Lab safety Practices
j) X-Ray Fluorescence Principle & Operation
k) Sampling Techniques for precious metals analysis (Theory and Practical)
l) Fire Assay Technique for Gold (Theory and Practical)

m) Potentiometric method for Silver Assay
n) Assaying of Silver (Potentiometric) Method (Practical)
o) Practical exposure of the activities undertaken in assaying and hallmarking Centre - Training on Hallmarking at A&H Centre
p) Final Examination at Referral Assay Lab (2 hours theory examination & 6 Hours practical examination)

12.4 Target participants

a) Personnel currently working in the Assaying and Hallmarking Centres
b) Assayers and Artisans
c) Persons wanting to make a career in the Assaying and Hallmarking field.

12.5 Frequency and Batch Size

No of Programmes in a year – 4 per year, duration of 5 weeks with batch size of Max 20 participants.

12.6 Content Development Committee

a. 01 Representative from HMD
b. 01 Representative from BIS Lab(nominated by LPPD)
c. 01 Representatives from Industry nominated by HMD
d. 01 Representative from NITS

12.7 Resource Person / Faculty

Competent personnel from BIS and Industry.

12.8 Training Methodology

Blended approach – Online theory classes, practical classes in BIS labs and practical demonstration at identified A&H Centre.

12.9 Continual Improvement

The Coordination Committee shall evaluate each phase of the trainings through feedbacks, assessments, follow ups, etc, so as to make sure it has achieved its aim in terms of subsequent work performance and recommend necessary amendments for continual improvement of the training solutions.

12.10 Communication - Promotion & Marketing

E-Mails and Letters to Licensees and Industry associations.

13 Week-long Summer Vacation Training Programme on Learning Science via Standards for Students & Teachers

13.1 Introduction

1.1.1 Children are the future and form the foundation on which strong, vibrant and dynamic Nation is built. The values children are exposed to in their formative years get inculcated in their young minds and serve as a force multiplier that has the capacity to transform the future of a Nation. Quality consciousness, based on Standardization is one of the pillars of accelerated economic development and priming students to appreciate the significance of quality, Standards and Standardization can serve as a catalyst to improve social awareness on these subjects.

1.1.2 Bureau of Indian Standards (BIS) has decided to launch a new initiative "Learning Science via Standards" for the students and teachers of the schools having Standards Clubs. "Learning Science via Standards" is a project-based approach to using standards as a vehicle of promoting quality consciousness.

1.1.3 The initiative will help in creating a more conducive environment for acceptance of standards by demonstrating their relationship with scientific concepts, Principles and Laws of Science.

13.2 Objectives

a) To create awareness on Standards and promote quality consciousness among students and teachers.
b) To inculcate standards culture and to sensitize the students and teachers on impact of standards on life and society.
c) To create a more conducive environment for acceptance of standards by demonstrating their relationship with scientific concepts, Principles and Laws of Science.

13.3 Course Structure

a) Concepts of Quality and Standardization
b) Types of Standardization and Standards
c) Benefits of Standardization
d) Standardization at National & International Levels
e) Scope of the standard and a comparative analysis of the advantages and disadvantages of compliance with and without the standard.
f) Elaboration of the concepts and laws the important features of the standard are based on.
g) Classroom Activity - group work to identify the relevant concept and law, and present the findings, followed by discussion on those concepts/laws and how they are applied to the standard.
h) Classroom activity to discuss the possible ways to make the standard more environment friendly, need for reducing the carbon footprint and circular economy, SDGs etc.

13.4 Target Participants

School Students and Teachers

13.5 Frequency and Batch Size

No of Programmes in a year – 1, duration of 6 days (for students) and 2 days (for teachers) -with batch size 20 (Min) - 40 (Max) participants

13.6 Content Development Committee

The Content development Committee shall constitute of following members.

a) 02 Representative from TNMD
b) 01 Representative from NITS

13.7 Resource Person / Faculty

a) Competent personnel from BIS BOs.

13.8 Training Methodology

a) Interactive Classroom Sessions.
b) Workshops, Case Studies and Activities.

13.9 Continual Improvement

The Coordination Committee shall evaluate each phase of the trainings through feedbacks, assessments, follow ups, etc, so as to make sure it has achieved its aim in terms of subsequent work performance and recommend necessary amendments for continual improvement of the training solutions.

13.10 Communication - Promotion & Marketing

E-Mails and Letters to Schools, Education Boards & Education

14 Lead Auditor Course On Quality Management System (IS/ISO 9001:2015)

14.1 Introduction

14.1.1 ISO 9001:2015 specifies requirements for a quality management system when an organization needs to demonstrate its ability to consistently provide products and services that meet customer and applicable statutory and regulatory requirements and aims to enhance customer satisfaction through the effective application of the system, including processes for improvement of the system and the assurance of conformity to customer and applicable statutory and regulatory requirements.

14.1.2 All the requirements of ISO 9001:2015 are generic and are intended to be applicable to any organization, regardless of its type or size, or the products and services it provides.

14.2 Objectives

a) Appreciate the purpose and benefits of a Quality Management System.
b) Understand the requirements of ISO 9001:2015 in the context of an audit.
c) Understanding QMS Principles in the context of the Risk Assessment and the requirements of various acts and rules applicable in the industry sector.
d) Learn the role of an Auditor to plan, conduct, report and follow up on Quality Management System Audit in accordance with ISO 19011:2018.
e) To effectively perform a full 1st, 2nd or 3rd party assessment of Quality Management Systems and generate audit findings.
f) To assess the overall conformity (or otherwise) of a QMS to the audit criteria.

14.3 Course Structure

a) Structure and Overview of IS/ISO 9001:2015
b) ISO 9001:2015 requirements.
c) PDCA / Process approach/ Quality Management principles /Risk-based thinking.
d) Audit definition and principles.
e) Planning, preparation, tools, and techniques of audit.
f) Post audit activities including corrective actions.
g) Exercises / Workshops.
h) Examination

14.4 Target Participants

a) Professionals wanting to gain comprehensive knowledge about Quality Management System.
b) Personnel responsible for implementing QMS.
c) Expert advisors/ Consultants for Quality Management Systems.
d) Auditors / Internal Auditors.
e) BIS Officers who will be assigned audits for Management System Certification

14.5 Frequency and Batch Size

No of Programmes in a year – 4, duration of 5 days with batch size 10 (Min) - 20 (Max) participants

14.6 Content Development Committee

These Courses are done with alliance of Service Providers and Content are developed by them.

14.7 Resource Person / Faculty

Competent personnel from Industry or Service Provider

14.8 Training Methodology

a) Interactive Classroom Sessions.

b) Workshops, case studies and auditing exercises.

14.9 Continual Improvement

The Coordination Committee shall evaluate each phase of the trainings through feedbacks, assessments, follow ups, etc, so as to make sure it has achieved its aim in terms of subsequent work performance and recommend necessary amendments for continual improvement of the training solutions.

14.10 Communication - Promotion & Marketing

Mail to MSCOs, previous participating organisations, contact to stakeholders

15 Lead Auditor Course On Food Safety Management System (IS/ISO 22000:2018)

15.1 Introduction

ISO 22000:2018 specifies requirements for a Food Safety Management System where an organization in the food chain needs to demonstrate its ability to control food safety hazards in order to ensure that food is safe at the time of human consumption. It is applicable to all organizations, regardless of size, which are involved in any aspect of the food chain and want to implement systems that consistently provide safe products. The means of meeting any requirements of ISO 22000 can be accomplished through the use of internal and / or external resources.

15.2 Objectives

a) Appreciate the purpose and benefits of a Food Safety Management System.
b) Understand the requirements of ISO 22000:2018 in the context of an audit.
c) Understanding FSMS Principles in the context of the Risk Assessment and the requirements of various acts and rules applicable in the industry sector.
d) Learn the role of an Auditor to plan, conduct, report and follow up on Food Safety Management System Audit in accordance with ISO 19011:2018.
e) To effectively perform a full 1st. 2nd or 3rd party assessment of Food Safety Management Systems and generate audit findings.
f) To assess the overall conformity (or otherwise) of a FSMS to the audit criteria.

15.3 Course Structure

a) Structure and Overview of IS/ISO 22000:2018
b) ISO 22000:2018 requirements.
c) PDCA / Process approach/ Food Safety Management principles /Risk-based thinking.
d) Audit definition and principles.
e) Planning, preparation, tools, and techniques of audit.
f) Post audit activities including corrective actions.
g) Exercises / Workshops.
h) Examination

15.4 Target Participants

a) Professionals wanting to gain comprehensive knowledge about Food Safety Management System.
b) Personnel responsible for implementing FSMS.
c) Expert advisors/ Consultants for Food Safety Management Systems.
d) Auditors / Internal Auditors.
e) BIS Officers who will be assigned audits for Management System Certification

15.5 Frequency and Batch Size

No of Programmes in a year – 4, duration of 5 days with batch size 10 (Min) - 20 (Max) participants

15.6 Content Development Committee

The Content development Committee shall constitute of members from Industry & Service Providers.

15.7 Resource Person / Faculty

These Courses are done with alliance of Service Providers and Content are developed by them

15.8 Training Methodology

a) Interactive Classroom Sessions.
b) Workshops, case studies and auditing exercises

15.9 Continual Improvement

The Coordination Committee shall evaluate each phase of the trainings through feedbacks, assessments, follow ups, etc, so as to make sure it has achieved its aim in terms of subsequent work performance and recommend necessary amendments for continual improvement of the training solutions.

15.10 Communication - Promotion & Marketing

Mail to MSCOs, previous participating organisations, contact to stakeholders

16 Lead Auditor Course On Energy Management System (IS/ISO 50001:2018)

16.1 Introduction

ISO 50001 specifies the energy management system (EnMS) requirements for an organization. Successful implementation of an EnMS supports a culture of energy performance improvement that depends upon commitment from all levels of the organization, especially top management. In many instances, this involves cultural changes within an organization. The aim of ISO 50001 is to enable organizations to establish the systems and processes necessary to continually improve energy performance, including energy efficiency, energy use and energy consumption

16.2 Learning Objectives

a) Appreciate the purpose and benefits of an Energy Management System.
b) Understand the requirements of ISO 50001:2018 in the context of an audit.
c) Summarize the role of law in energy conservation and the requirements of various acts and rules applicable in the industry sector.
d) Learn the role of an Auditor to plan, conduct, report and follow up on Energy Management System Audit in accordance with ISO 19011:2018.
e) To effectively perform a full 1st. 2nd or 3rd party assessment of Energy Management Systems and generate audit findings.
f) To assess the overall conformity (or otherwise) of a EnMS to the audit criteria.

16.3 Course Structure

a) Structure and Overview of IS/ISO 50001:2018
b) ISO 50001:2018 requirements.
c) Interrelationship between Management Responsibility, Energy Policy, Energy Planning, Checking Performance, Management Review and Continual Improvement.
d) Audit definition and principles.
e) Planning, preparation, tools, and techniques of audit.
f) Post audit activities including corrective actions.
g) Exercises / Workshops.
h) Examination

16.4 Target Participants

a) Professionals wanting to gain comprehensive knowledge about Energy Management System.
b) Personnel responsible for implementing EnMS.
c) Expert advisors/ Consultants for Energy Management Systems.
d) Auditors / Internal Auditors.
e) BIS Officers who will be assigned audits for Management System Certification

16.5 Frequency and Batch Size

No of Programmes in a year —2, duration of 5days with batch size 10 (Min) - 20 (Max) participants

16.6 Content Development Committee

These Courses are done with alliance of Service Providers and Content are developed by them

16.7 Resource Person / Faculty

Competent personnel from Industry or Service Provider

16.8 Training Methodology

a) Interactive Classroom Sessions.
b) Workshops, case studies and auditing exercises

16.9 Continual Improvement

The Coordination Committee shall evaluate each phase of the trainings through feedbacks, assessments, follow ups, etc, so as to make sure it has achieved its aim in terms of subsequent work performance and recommend necessary amendments for continual improvement of the training solutions.

16.10 Communication - Promotion & Marketing

Mail to MSCOs, previous participating organisations, contact to stakeholders

17 Lead Auditor Course On Environmental Management System (IS/ISO 14001:2015)

17.1 Introduction

17.1.1 ISO 14001:2015 specifies the requirements for an environmental management system that an organization can use to enhance its environmental performance. ISO 14001:2015 is intended for use by an organization seeking to manage its environmental responsibilities in a systematic manner that contributes to the environmental pillar of sustainability.

17.1.2 ISO 14001:2015 helps an organization achieve the intended outcomes of its environmental management system, which provide value for the environment, the organization itself and interested parties. Consistent with the organization's environmental policy, the intended outcomes of an environmental management system include:

- **a)** enhancement of environmental performance;
- **b)** fulfilment of compliance obligations;
- **c)** achievement of environmental objectives.

17.1.3 ISO 14001:2015 is applicable to any organization, regardless of size, type and nature, and applies to the environmental aspects of its activities, products and services that the organization determines it can either control or influence considering a life cycle perspective. ISO 14001:2015 does not state specific environmental performance criteria.

17.1.4 ISO 14001:2015 can be used in whole or in part to systematically improve environmental management. Claims of conformity to ISO 14001:2015, however, are not acceptable unless all its requirements are incorporated into an organization's environmental management system and fulfilled without exclusion.

17.2 Objectives

- **a)** Appreciate the purpose and benefits of an Environmental Management System.
- **b)** Understand the requirements of ISO 14001:2015 in the context of an audit.
- **c)** Understanding EMS Principles in the context of the Risk Assessment and the requirements of various acts and rules applicable in the industry sector.
- **d)** Learn the role of an Auditor to plan, conduct, report and follow up on Environmental Management System Audit in accordance with ISO 19011:2018.
- **e)** To effectively perform a full 1st, 2nd or 3rd party assessment of Environmental Management Systems and generate audit findings.
- **f)** To assess the overall conformity (or otherwise) of a EMS to the audit criteria.

17.3 Course Structure

- **a)** Structure and Overview of IS/ISO 14001:2015
- **b)** ISO 14001:2015 requirements.
- **c)** PDCA / Process approach/ Environmental Management principles /Risk-based thinking.
- **d)** Audit definition and principles.
- **e)** Planning, preparation, tools, and techniques of audit.

f) Post audit activities including corrective actions.
g) Exercises / Workshops.
h) Examination

17.4 Target Participants

a) Professionals wanting to gain comprehensive knowledge about Environmental Management System.
b) Personnel responsible for implementing EMS.
c) Expert advisors/ Consultants for Environmental Management Systems.
d) Auditors / Internal Auditors.
e) BIS Officers who will be assigned audits for Management System Certification

17.5 Frequency and Batch Size

No of Programmes in a year – 4, duration of 5 days with batch size 10 (Min) - 20 (Max) participants

17.6 Content Development Committee

These Courses are done with alliance of Service Providers and Content are developed by them

17.7 Resource Person / Faculty

Competent personnel from Industry or Service Provider

17.8 Training Methodology

a) Interactive Classroom Sessions.
b) Workshops, case studies and auditing exercises

17.9 Continual Improvement

The Coordination Committee shall evaluate each phase of the trainings through feedbacks, assessments, follow ups, etc, so as to make sure it has achieved its aim in terms of subsequent work performance and recommend necessary amendments for continual improvement of the training solutions.

17.10 Communication - Promotion & Marketing

Mail to MSCOs, previous participating organisations, contact to stakeholders

18 Lead Auditor Course on Anti Bribery Management System (IS/ISO 37001:2016)

18.1Introduction

18.1.1 Anti-Bribery Management Systems: ISO 37001:2016 specifies requirements and provides guidance for establishing, implementing, maintaining, reviewing and improving an anti-bribery management system. The system can be stand-alone or can be integrated into an overall management system. ISO 37001:2016 addresses the following in relation to the organization's activities:

a) bribery in the public, private and not-for-profit sectors;
b) bribery by the organization;
c) bribery by the organization's personnel acting on the organization's behalf or for its benefit;
d) bribery by the organization's business associates acting on the organization's behalf or for its benefit;
e) bribery of the organization;
f) bribery of the organization's personnel in relation to the organization's activities;
g) bribery of the organization's business associates in relation to the organization's activities;
h) direct and indirect bribery (e.g. a bribe offered or accepted through or by a third party).

18.2 Objectives

a) Understand the operations of an Anti-bribery Management System (ABMS) based on ISO 37001
b) Acknowledge the correlation between ISO 37001 and other standards and regulatory frameworks
c) Understand an auditor’s role to: plan, lead and follow-up on a management system audit in accordance with ISO 19011
d) Learn how to lead an audit and audit team h Learn how to interpret the requirements of ISO 37001 in the context of an ABMS audit
e) Acquire the competencies of an auditor to: plan an audit, lead an audit, draft reports, and follow-up on an audit in compliance with ISO 19011

18.3 Course Structure

a) Structure and Overview of IS/ISO 37001:2016
b) ISO 37001:2016 requirements.
c) Anti-Bribery Management Concepts and Principles
d) Audit definition and principles.
e) Planning, preparation, tools, and techniques of audit.
f) Post audit activities including corrective actions.
g) Exercises / Workshops.
h) Examination

18.4 Target Participants

- **a)** Auditors seeking to perform and lead Anti-bribery Management System (ABMS) certification audits
- **b)** Managers or consultants seeking to master an Anti-bribery Management System audit process
- **c)** Individuals responsible for maintaining conformance with ABMS requirements
- **d)** Technical experts seeking to prepare for an Anti-bribery Management System audit
- **e)** Expert advisors in Anti-bribery Management
- **f)** BIS Officers who will be assigned audits for Management System Certification

18.5 Frequency and Batch Size

No of Programmes in a year –3, duration of 5days with batch size 10 (Min) - 20 (Max) participants

18.6 Content Development Committee

These Courses are done with alliance of Service Providers and Content are developed by them

18.7 Resource Person / Faculty

Competent personnel from Industry or Service Provider

18.8 Training Methodology

- **c)** Interactive Classroom Sessions.
- **d)** Workshops, case studies and auditing exercises

18.9 Continual Improvement

The Coordination Committee shall evaluate each phase of the trainings through feedbacks, assessments, follow ups, etc, so as to make sure it has achieved its aim in terms of subsequent work performance and recommend necessary amendments for continual improvement of the training solutions.

18.10 Communication - Promotion & Marketing

Mail to MSCOs, previous participating organisations, contact to stakeholders

19 Lead Auditor Course on Occupational Health & Safety Management System (IS/ISO 45001:2018)

19.1 Introduction

19.1.1 ISO 45001:2018 specifies requirements for an occupational health and safety (OH&S) management system, and gives guidance for its use, to enable organizations to provide safe and healthy workplaces by preventing work-related injury and ill health, as well as by proactively improving its OH&S performance.

19.1.2 ISO 45001:2018 is applicable to any organization that wishes to establish, implement and maintain an OH&S management system to improve occupational health and safety, eliminate hazards and minimize OH&S risks (including system deficiencies), take advantage of OH&S opportunities, and address OH&S management system nonconformities associated with its activities.

19.1.3 ISO 45001:2018 helps an organization to achieve the intended outcomes of its OH&S management system. Consistent with the organization's OH&S policy, the intended outcomes of an OH&S management system include:

a) continual improvement of OH&S performance;
b) fulfilment of legal requirements and other requirements;
c) achievement of OH&S objectives.

19.1.4 ISO 45001:2018 is applicable to any organization regardless of its size, type and activities. It is applicable to the OH&S risks under the organization's control, taking into account factors such as the context in which the organization operates and the needs and expectations of its workers and other interested parties.

19.2 Objectives

a) Appreciate the purpose and benefits of Occupational Health & Safety Management System.
b) Understand the requirements of IS/ISO 45001:2018 in the context of an audit.
c) Understanding OHSMS Principles in the context of the Risk Assessment and the requirements of various acts and rules applicable in the industry sector.
d) Learn the role of an Auditor to plan, conduct, report, and follow up on Occupational Health & Safety management system audit in accordance with ISO 19011:2018.
e) To effectively perform a full 1st, 2nd or 3rd party assessment of the Management System and generate audit findings.
f) To assess the overall conformity (or otherwise) of an OHSMS to the audit criteria.

19.3 Course Structure

a) Structure and Overview of IS/ISO 45001:2018

b) IS/ISO 45001:2018 requirements
c) PDCA / Process approach / Occupational Health & Safety Management principles/ Risk-based thinking
d) Audit definition and principles.
e) Planning, preparation, tools, and techniques of audit.
f) Post audit activities including corrective actions.
g) Exercises/Workshops
h) Examination

19.4 Target Participants

a) Auditors seeking to perform and lead Occupational Health & Safety Management System certification audits
b) Managers or consultants seeking to master an Occupational Health & Safety Management System audit process
c) Individuals responsible for maintaining conformance with OHSMS requirements
d) Technical experts seeking to prepare for an OHSMS audit
e) Expert advisors in Anti-bribery Management
f) BIS Officers who will be assigned audits for Management System Certification

19.5 Frequency and Batch Size

No of Programmes in a year –2, duration of 5days with batch size 10 (Min) - 20 (Max) participants

19.6 Content Development Committee

These Courses are done with alliance of Service Providers and Content are developed by them.

19.7 Resource Person / Faculty

Competent personnel from Industry or Service Provider

19.8 Training Methodology

a. Interactive Classroom Sessions.
b. Workshops, case studies and auditing exercises

19.9 Continual Improvement

The Coordination Committee shall evaluate each phase of the trainings through feedbacks, assessments, follow ups, etc, so as to make sure it has achieved its aim in terms of subsequent work performance and recommend necessary amendments for continual improvement of the training solutions.

19.10 Communication - Promotion & Marketing

Mail to MSCOs, previous participating organisations, contact to stakeholders

20 DOCUMENTATION AND INTERNAL AUDIT COURSE ON SERVICE QUALITY MANAGEMENT SYSTEM (IS 15700:2018)

20.1 Introduction

20.1.1 IS 15700:2018 specifies requirements for a quality management system where a public service organization:

- **a)** needs to demonstrate its ability to consistently provide effective and efficient service that meets customer and applicable legal, statutory and regulatory requirements;
- **b)** aims to enhance customer satisfaction; and
- **c)** aims to continually improve its service and service delivery process.

20.2 Learning Objectives

- **a)** Describe the purpose of a Quality Management System as per IS 15700.
- **b)** Explain the structure, purpose, content of IS 15700:2005, and its interrelationship with ISO 9000, ISO 10002:2004, and ISO 19011.
- **c)** Understand the international conformance systems and its benefits, certification/ accreditation and the process of certification.
- **d)** Interpret the requirements of IS 15700 in the context of a Public Service Organization.
- **e)** Describe the roles and responsibilities of a Nodal Officer as per IS 15700.
- **f)** Steps Involved in IS 15700:2005 Implementation, Certification and maintenance
- **g)** To Underline how implementation of IS 15700:2005 can help implement e-Governance Projects more successfully

20.3 Course Structure

- **a)** Structure and Overview of IS 15700:2018
- **b)** IS 15700:2018 requirements.
- **c)** PDCA / Process approach/ Quality Management principles /Risk-based thinking.
- **d)** Service Delivery Standard and QM Principles
- **e)** Requirements for Service Quality by Public Service Organizations (IS 15700) – Elements
- **f)** Complaints Handling Process
- **g)** Audit definition and principles.
- **h)** Planning, preparation, tools, and techniques of audit.
- **i)** Post audit activities including corrective actions.
- **j)** Exercises / Workshops.
- **k)** Examination

20.4 Target Participants

- **a)** Professionals from various Public Service Organization(s), who wish to provide an effective and efficient service quality.

b) Public Service Organizations including all those central/ state govt. departments, public utility service providers, regulatory bodies, banks, public transport providers, large public hospitals and schools providing services to the public at large and/or whose activities influence public interest.

c) Public Service Organizations intended to support those who are either implementing IS 15700:2005 or are providing auditing services as auditors/ certification body.

d) BIS Officers who will be assigned audits for Management System Certification

20.5 Frequency and Batch Size

No of Programmes in a year –2, duration of 2 days with batch size 10 (Min) - 20 (Max) participants

20.6 Content Development Committee

2 members from MSCD and 1 member from NITS

20.7 Resource Person / Faculty

Competent personnel from BIS, Industry or Service Provider

20.8 Training Methodology

a) Interactive Classroom Sessions.

b) Workshops, case studies and auditing exercises

20.9 Continual Improvement

The Coordination Committee shall evaluate each phase of the trainings through feedbacks, assessments, follow ups, etc, so as to make sure it has achieved its aim in terms of subsequent work performance and recommend necessary amendments for continual improvement of the training solutions.

20.10 Communication - Promotion & Marketing

Mail to MSCOs, previous participating organisations, Public Service Organizations, Contact to stakeholders

21 Training Programme on "Laboratory Quality Management System And Internal Audit as per IS/ISO/IEC 17025:2017"

21.1Introduction

21.1.1 This Indian Standard (Second Revision) which is identical with ISO/IEC 17025 : 2017 'General requirements for the competence of testing and calibration laboratories' issued by the International Organization for Standardization (ISO) and the International Eletrotechnical Commission (IEC) was adopted by the Bureau of Indian Standards on recommendation of the CASCO National Mirror Committee and approval of the Management and Systems Division Council.

21.1.2 IS/ISO/IEC 17025: 2017 has been developed with the objective of promoting confidence in the operation of laboratories and contains requirements for laboratories to enable them to demonstrate they operate competently, and are able to generate valid results. Laboratories that conform to this document will also operate generally in accordance with the principles of ISO 9001.

21.2 Objectives

a) Appreciate the purpose and benefits of a Laboratory Quality Management System.
b) Understand the requirements of IS/ISO/IEC 17025:2017 in the context of an audit.
c) Understanding LQMS Principles in the context of the Risk Assessment and the requirements of various acts and rules applicable in the industry sector.
d) Learn the role of an Auditor to plan, conduct, report and follow up on Laboratory Quality Management System Audit in accordance with ISO 19011:2018.
e) To effectively perform a full 1st, 2nd or 3rd party assessment of Quality Management Systems and generate audit findings.
f) To assess the overall conformity (or otherwise) of a QMS to the audit criteria.

21.3 Course Structure

a) Structure and Overview of IS/ISO/IEC 17025:2017
b) IS/ISO/IEC 17025:2017 requirements.
c) PDCA / Process approach/ Quality Management principles /Risk-based thinking.
d) Audit definition and principles.
e) Planning, preparation, tools, and techniques of audit.
f) Post audit activities including corrective actions.
g) Exercises / Workshops.

21.4 Target Participants

a) Laboratory Personnel/ Auditors /Internal Auditors wanting to gain comprehensive knowledge about Laboratory Quality Management System.
b) Personnel responsible for implementing LQMS.
c) Expert advisors/ Consultants for Quality Management Systems.

21.5 Frequency and Batch Size

No of Programmes in a year 16, duration of 4 days with batch size 10 (Min) - 30 (Max) participants

21.6 Content Development Committee

Expert from NABL, Expert Faculty from BIS/ Ex-BIS, MS of MSD-14/ HMSD, and Course Coordinator (NITS)

21.7 Resource Person / Faculty

Competent personnel from NABL, Expert Faculty (Ex-BIS), BIS Scientific Officer having Laboratory Experiences.

21.8 Training Methodology

a) Interactive Classroom Sessions.
b) Workshops, Exercises, Case studies and auditing exercises.
c) Soft /Hard copy of all training material.

21.9 Continual Improvement

The Coordination Committee shall evaluate each phase of the trainings through feedbacks, assessments, follow ups, etc, so as to make sure it has achieved its aim in terms of subsequent work performance and recommend necessary amendments for continual improvement of the training solutions.

21.10 Communication - Promotion & Marketing

Mail to previous participating organisations, contact to stakeholders

22 Training Programme On "Medical Laboratories Quality Systems And Internal Audit as per IS/ISO 15189:2022"

22.1 Introduction

IS/ISO 15189 : 2022 (Fourth edition) Medical laboratories — Requirements contains requirements for the medical laboratory to plan and implement actions to address risks and opportunities for improvement. Benefits of this approach include: increasing the effectiveness of the management system, decreasing probability of invalid results, and reducing potential harm to patients, laboratory personnel, the public and the environment. The requirements for risk management are aligned with the principles of ISO 22367. The requirements for laboratory safety are aligned with the principles of ISO 15190. The requirements for sample collection and transport are aligned with ISO 20658.1) This document contains the requirements for point-of-care testing (POCT) and supersedes ISO 22870, which will be withdrawn upon publication of this document.

22.2 Objectives

a) Appreciate the purpose and benefits of a Medical Laboratories Quality System.
b) Understand the requirements of IS/ISO 15189:2022 in the context of an audit.
c) Understanding MLQMS Principles in the context of the Risk Assessment and the requirements of various acts and rules applicable in the industry sector.
d) Learn the role of an Auditor to plan, conduct, report and follow up on MLQMS Audit in accordance with ISO 19011:2018.
e) To effectively perform a full 1st, 2nd or 3rd party assessment of Medical Laboratories Quality Systems and generate audit findings.
f) To assess the overall conformity of a MLQMS 15189 to the audit criteria.

22.3 Course Structure

a) Structure and Overview of IS/ISO 15189:2022
b) IS/ISO 15189:2022 requirements.
c) PDCA / Process approach/Risk-based thinking.
d) Audit definition and principles.
e) Planning, preparation, tools, and techniques of audit.
f) Post audit activities including corrective actions.
g) Exercises / Workshops.

22.4 Target Participants

a) Professionals wanting to gain comprehensive knowledge about Medical Laboratories Quality System as per ISO 15189.
b) Personnel responsible for implementing MLQMS 15189.
c) Person related to Medical Laboratory Services, Patient care, Clinical work, Clinical physiolog, Medical imaging and Medical physics etc.

d) Senior Medical Laboratory Personnel involved in the management and establishment of Medical Laboratory Quality Systems and internal audit programmes for their laboratories as required by NABL Criteria & International Standard ISO 15189: 2022.
e) Expert advisors/ Consultants /Auditors / Internal Auditors.

22.5 Frequency and Batch Size

No of Programmes in a year –2, duration of 4 days with batch size 10 (Min) - 25(Max) participants

22.6 Content Development Committee

Expert from NABL, Expert Faculty for 15189, MS of MHD-14/ HMHD, and Course Coordinator (NITS)

22.7 Resource Person / Faculty

Competent personnel from NABL, Expert Faculty for 15189, Expert Faculty having Medical Laboratory/ Hospital Experiences.

22.8 Training Methodology

a) Interactive Classroom Sessions.
b) Workshops, Exercises, Case studies and auditing exercises.
c) Soft /Hard copy of all training material.

22.9 Continual Improvement

The Coordination Committee shall evaluate each phase of the trainings through feedbacks, assessments, follow ups, etc, so as to make sure it has achieved its aim in terms of subsequent work performance and recommend necessary amendments for continual improvement of the training solutions.

22.10 Communication - Promotion & Marketing

Mail to previous participating organisations, contact to stakeholders/ target Participants.

23 TRAINING PROGRAMME ON "MEASUREMENT UNCERTAINTY"

23.1 Introduction

23.1.1 Measurement uncertainty is defined as a "parameter, associated with the result of a measurement that characterizes the dispersion of the values that could reasonably be attributed to the measurand" (JCGM, 2008). Uncertainty is a quantification of the doubt about the measurement result. Whenever possible we try to correct for any known errors: for example, by applying corrections from calibration certificates. But any error whose value we do not know is a source of uncertainty.

23.1.2 As per clause 7.8.3.1 c) of IS/ISO/IEC 17025:2017 where applicable, the measurement uncertainty presented in the same unit as that of the measurand or in a term relative to the measurand (e.g. percent) when:

a) it is relevant to the validity or application of the test results;
b) a customer's instruction so requires, or
c) the measurement uncertainty affects conformity to a specification limit;

23.2 Objectives

a) Clear understanding of Basic Statistical Concepts.
b) Know the factors responsible for measurement uncertainties (MU)
c) Identify these factors for your testing/ calibration.
d) Carry out the statistical calculations for evaluation of the MU
e) Formulate effectively Quality Control Plan for the laboratory measurements utilizing the uncertainty of Measurements.
f) Understanding a testing activity in terms of mathematical model, to be able to identify the significant control factors for accuracy or validity of results.

23.3 Course Structure

a) Overview and introduction of measurement uncertainty.
b) Basics of statistical calculations and components of uncertainty.
c) Step by step approach to uncertainty estimation.
d) Estimating different types of uncertainties.
e) Measurement uncertainty in calibration.
f) Concepts of combined and expanded uncertainty.
g) Exercises / Workshops.

23.4 Target Participants

a) Technical Heads of testing and calibration laboratory, including microbiological testing.
b) Young engineers / scientists working in testing field and wants to enhance their career, with a formal added professional qualification and skill up-gradation.
c) An individual working as consultant in ISO/IEC 17025 field.
d) Expert advisors/ Consultants /Auditors /Internal Auditors for LQMS/ MLQMS.

23.5 Frequency and Batch Size

No of Programmes in a year 3, duration of 2 days with batch size 10 (Min) - 25(Max) participants

23.6 Content Development Committee

Expert from NABL/NPL, Expert Faculty for Chemical, Electrical, Mechanical and Microbiological, having relevant Experiences from BIS /Ex-BIS and Course Coordinator (NITS)

23.7 Resource Person / Faculty

Competent personnel from NABL, Expert Faculty for Chemical, Electrical, Mechanical and Microbiological, having relevant Experiences.

23.8 Training Methodology

a) Interactive Classroom Sessions.
b) Workshops, Exercises, Case studies.
c) Soft /Hard copy of all training material.

23.9 Continual Improvement

The Coordination Committee shall evaluate each phase of the trainings through feedbacks, assessments, follow ups, etc, so as to make sure it has achieved its aim in terms of subsequent work performance and recommend necessary amendments for continual improvement of the training solutions.

23.10 Communication - Promotion & Marketing

Mail to previous participating organisations, contact to stakeholders/ target Participants.

.

24 TRAINING PROGRAMME ON "INTER LABORATORY COMPARISON, PROFICIENCY TESTING AND EVALUATION OF SCORES (ILC/PT)"

24.1 Introduction

24.1.1 Proficiency Testing is one of the important tools to determine the technical competence of the Testing, Calibration and Medical Testing laboratories. According to ISO/IEC 17025 a laboratory shall have quality control procedures for monitoring the validity of tests and calibrations undertaken. This monitoring may include the participation in interlaboratory comparisons or proficiency testing programs. Other means may include the regular use of reference materials, or replicate tests or calibrations using the same or different methods. By these mechanisms a laboratory can provide evidence of its competence to its clients, interested parties and the accreditation body.

24.1.2 ISO 15189 also requires that medical laboratories seek confirmation for confidence in their results through participation in suitable inter laboratory comparisons.

24.1.3 The laboratory shall monitor its performance by comparison with results of other laboratories, where available and appropriate. This monitoring shall be planned and reviewed and shall include, but not be limited to, either or both of the following:

a) participation in proficiency testing ;Note: ISO/IEC 17043 contains additional information on proficiency tests and proficiency testing providers. Proficiency testing providers that meet the requirements of ISO/IEC17043 are considered to be competent.

b) participation in interlaboratory comparisons other than proficiency testing.

24.1.4 Interlaboratory Comparison is organization, performance and evaluation of measurements or tests on the same or similar items by two or more laboratories in accordance with predetermined
conditions. Proficiency testing means evaluation of participant performance against pre-established criteria by means of interlaboratory comparisons.Outlier is observation in a set of data that appears to be inconsistent with the remainder of that set

24.2 Objectives

- **a)** Know the requirements of ILC/PT
- **b)** Identify types of ILC/PT required for your testing/calibration.
- **c)** Plan the PT/ ILC required for your organization.
- **d)** Plan for statistical requirements of PT/ ILC.
- **e)** Conducting the PT/ ILC program.
- **f)** Carry out the statistical calculations for evaluation of the scores (z score).
- **g)** Know how to detect outliers in the results.
- **h)** Homogenization and stabilization of samples prepared for PT.

24.3 Course Structure

a) Inter lab comparison vs Proficiency Testing.
b) Proficiency Testing Schemes.
c) Evaluation of Proficiency testing results.
d) Evaluation of Z Scores.
e) ISO/IEC 17025 Requirements for Proficiency Testing.
f) ILAC Requirements for Proficiency Testing.

24.4 Target Participants

a) Personnel responsible for implementing LQMS/MLQMS.
b) Laboratory/Testing Personnel/Quality Managers/Technical Managers.
c) Expert advisors/Consultants
d) Auditors / Internal Auditors.

24.5 Frequency and Batch Size

No of Programmes in a year –3, duration of 2 days with batch size 10 (Min) - 25(Max) participants

24.6 Content Development Committee

Expert from NABL/NPL, Expert Faculty for Chemical, Electrical, Mechanical and Microbiological, having relevant Experiences from BIS /Ex-BIS and Course Coordinator (NITS)

24.7 Resource Person / Faculty

Competent personnel from NABL, Expert Faculty for Chemical, Electrical, Mechanical and Microbiological, having relevant Experiences.

24.8 Training Methodology

d) Interactive Classroom Sessions.
e) Workshops, Exercises, Case studies.
f) Soft /Hard copy of all training material.

24.9 Continual Improvement

The Coordination Committee shall evaluate each phase of the trainings through feedbacks, assessments, follow ups, etc, so as to make sure it has achieved its aim in terms of subsequent work performance and recommend necessary amendments for continual improvement of the training solutions.

24.10 Communication - Promotion & Marketing

Mail to previous participating organisations, contact to stakeholders/ target Participants.

25 International Training Programmes for Developing Countries

25.1 Introduction

25.1.1 NITS is one of the training institutes identified by Ministry of External Affairs, Govt. of India under Indian Technical and Economic Cooperation (ITEC) and e-ITEC programmes, for imparting trainings to participants from developing countries.

25.1.2 NITS has been conducting these programmes for developing countries of Asia, Africa, Europe and Latin America every year since 1968. The following programmes are being conducted for developing countries:

a) International Training Programme on Management Systems
b) International training Programme on Standardization and Quality Assurance
c) International Training Programme on Laboratory Quality Management Systems.

25.1.3 So far, 53 programmes have been conducted in the field of "Standardization and Quality Assurance", 17 programme on "Management Systems" and 13 programmes on Laboratory Quality Management Systems.

25.2 Objectives

25.2.1 International Training Programme on Management Systems

a) Understanding the fundamentals of management systems
b) Developing knowledge of various management system standards such as ISO 9001, ISO 14001, ISO 45001, and ISO 50001.
c) Understanding the requirements and implementation processes for different management system standards.
d) Developing skills in auditing and reviewing management systems to ensure compliance with standards.
e) Understanding the benefits of integrating management systems for improved organizational performance.
f) Developing an understanding of the importance of continuous improvement in management systems.
g) Developing effective communication and leadership skills for successful management system implementation and maintenance.
h) Understanding the legal and regulatory requirements related to management systems.

25.2.2 International training Programme on Standardization and Quality Assurance

a) Understanding the fundamentals of standardization and its importance in different industries and sectors.
b) Learning about the principles and methods of quality assurance, including statistical process control and quality control.

c) Understanding the importance of customer satisfaction and customer-focused quality management.
d) Developing an understanding of the different types of standards and their development processes.
e) Understanding the role of national and international standardization bodies and their processes for developing and maintaining standards.
f) Developing an understanding of the accreditation and certification process for management systems and conformity assessment.

25.2.3 International Training Programme on Laboratory Quality Management Systems.

a) Understanding the principles and concepts of laboratory quality management systems and their role in laboratory operations.
b) Developing an understanding of the requirements of international laboratory quality management system standards, such as ISO/IEC 17025:2017.
c) Understanding the principles and practices of measurement traceability and uncertainty in laboratory testing and calibration.
d) Developing skills in implementing and maintaining a laboratory quality management system.
e) Learning about the accreditation and certification process for laboratory quality management systems.
f) Developing skills in performing internal audits and assessments of laboratory quality management systems.

25.3 Course Structure

25.3.1 International Training Programme on Management Systems

a) IS/ISO 900 Quality Management System (QMS)
b) IS/ ISO 14001 Environmental Management Systems (EMS)
c) IS 15700 Service Quality Management Systems (SQMS)
d) IS 16001 Social Accountability at Workplace (SAMS)
e) IS/ISO/IEC 17025 Laboratory Quality Management Systems (LQMS)
f) IS/ISO 50001 Energy Management Systems (EnMS)
g) IS/ISO 4500 Occupational Hazards and Safety Management Systems (OHSMS)
h) IS/ISO 22000 Food Safety Management Systems
i) ISO 26000 Social Responsibility
j) IS/ISO/IEC 17021-1 International Accreditation systems,
k) IS/ISO 27001 Information Security Management Systems (ISMS)
l) ISO 31000 Risk Management
m) ISO 13485 Medical devices, Quality management systems Requirements for Regulatory purposes
n) Latest development at ISO/CASCO on Management Systems Standards, Guides & other sectoral standards
o) ISO 21001 Educational Organisational Management System (EoMS)

p) Integrated Management System

25.3.2 International training Programme on Standardization and Quality Assurance

a) Standardization:- Fundamentals, Development, Responsibilities of Committee Secretaries, International Standardization Scenario, Addressing sustainability in Standards.
b) Certification:- National Quality Infrastructure, Principles and Practices, Details of various Conformity Schemes of BIS, Case Studies and also various Management Systems.
c) Testing:- Laboratory Quality Management Systems, Interlab Comparison, Measurement Uncertainty, BIS lab Recognition Scheme.
d) Complaint Redressal System of BIS
e) Enforcement Activities
f) Standard Promotion Activities
g) Witnessing Technical Committee Meeting
h) Mock Committee Meetings for Formulation of Standards

25.3.3 International Training Programme on Laboratory Quality Management Systems.

a) Organization and Functions of National Standards Body (NSB)
b) An understanding of IS/ISO/IEC 17025:2017.
c) Developing and understanding on quality system documentation for the laboratory. It would include training on developing quality manual and procedures etc.
d) Management equipment, calibration, traceability, measurement uncertainty, environment, test methods,test items, safety, quality control, records and reports etc.
e) Techniques of conducting internal audit and reporting of the internal audit findings.
f) Management review and its contents.
g) Techniques for conducting Inter - Laboratory Comparison (ILC) / Proficiency Testing (PT) & evaluation of the scores.
h) Understanding of Uncertainty in Measurement.

25.4 Target Participants

a) Graduates in engineering or technology or in any discipline with professional experience in the field of Standardization/Quality/Environment/Food Safety/Occupational Health & Safety/Laboratory etc. from developing Countries.

b) Officers of National Standards Bodies (NSB) of developing Countries

25.5 Frequency and Batch Size

No of Programmes in a year – as per the requirement, duration of 3-4 weeks with batch size 35(Max) participants

25.6 Content Development Committee

a) 01 Representative from CMDI
b) 01 Representative from SCMD
c) 01 Representative from LPPD

d) 01 Representative from MSCD
e) 01 Representative from NITS

25.7 Resource Person / Faculty

Competent personnel from BIS, Industry, academia, professional and experts.

25.8 Training Methodology

a) Interactive Classroom Sessions (offline programmes)/Interactive Online sessions (online programmes)
b) Group exercises and discussions
c) Workshops and Case Studies.

26 Capsule Course on code of practices Standards

26.1 Introduction

Standards on code of practices provide a consistent set of guidelines, which helps ensure that they are of a consistent quality across different organizations and industries. They play a critical role in ensuring safety, quality, and efficiency in many industries, and can help to enhance competitiveness and facilitate trade. These standards are being used by various stakeholders like Govt Departments, regulatory authorities etc. Imparting training to stakeholders on Standards on code of practices is essential to ensure compliance, enhance quality and safety, improve productivity and efficiency, enhance reputation, and facilitate continuous improvement. It is a critical component of any organization's quality management system and can help to ensure long-term success and sustainability.

NITS conducts Capsule Courses on various code of Practices as per the requirement like Storage , Food Safety , welding etc

26.2 Learning Objectives

a) Bridging the gap in the practice followed by the user and the specified code of practice.
b) Making participants skilled enough to be achieving quality as per prescribed standards.

26.3 Course Structure

a) Understanding the Indian Standards.
b) Discussion on practices followed and that specified
c) Exercises and Workshops on above topics.
d) Visit to industry

26.4 Target participants

Personnel of relevant industry engaged in that activity.

26.5 Frequency and Batch Size

No of Programmes in a year – 4 per BO per year, duration of 2 days with batch size 20 (Min) - 40 (Max) participants

26.6 Content Development Committee

a) 01 Representative from concerned Technical deptt (nominated by SCMD)
b) 01 Representatives from Industry
c) 01 Representative from NITS

26.7 Resource Person / Faculty

Competent personnel from BIS and Industry.

26.8 Training Methodology

Classroom based with combination of lectures, presentations, videos, case studies and interactive workshops.

26.9 Continual Improvement

The Coordination Committee shall evaluate each phase of the trainings through feedbacks, assessments, follow ups, etc, so as to make sure it has achieved its aim in terms of subsequent work performance and recommend necessary amendments for continual improvement of the training solutions.

26.10 Communication - Promotion & Marketing

E-Mails and Letters to Licensees and Industry associations.

27 Sustainability Dialogues

27.1 Introduction A sustainable future means balancing the needs of the environmental, social and economic systems, and organizations are increasingly expected to play a significant role in achieving this. Transforming our world is the aim of the United Nations 2030 Agenda for Sustainable Development and its corresponding 17 Sustainable Development Goals (SDGs)

BIS is committed to leverage the power of Indian Standards to address the issues to achieve Sustainable Development Goals. BIS, through Sustainability Dialogues, aims to foster the stakeholder involvement to pool in their expertise and skills to address the issue of sustainability through Indian standards

Sustainability Dialogues are organized at NITS with the stakeholders to facilitate mutual shaping of the initiatives for Sustainable Development Goals by in-depth analysis, diagnosis and reflections on the key building blocks of the Quality ecosystem.

27.2 Learning Objectives

a) Enhancement of knowledge of technical committee members about sustainability
b) How the same can be achieved through Indian Standards.

27.3 Course Structure

First hand knowledge from industry experts through lecture series about how sustainability is addressed in the industry

27.4 Target participants

BIS officers from standard formulation.

27.5 Frequency and Batch Size

No of Programmes in a year – 12 , duration of 1 days with batch size 20 (Min) - 40 (Max) participants

27.6 Resource Person / Faculty

Competent personnel from Industry and academia.

27.7 Training Methodology

Classroom based with lectures, presentations, videos and interactive workshops.

27.8 Continual Improvement

The Coordination Committee shall evaluate each phase of the trainings through feedbacks, assessments, follow ups, etc, so as to make sure it has achieved its aim in terms of subsequent work performance and recommend necessary revisions for continual improvement of the training solutions.

27.9 Communication - Promotion & Marketing

E-Mails and Letters to experts from academia , industry and Industry associations.

28 Training Programmes for Consumers and NGOs

28.1 Introduction

To excel and achieve the Organization goals of Quality ecosystem, it is very important to impart training to consumers and NGOs. Providing training to consumers on standardization is aimed at enabling them to get a personalized exposure to the various activities of BIS. This will empower them to take advantages and benefits of BIS Schemes as applicable for them and utilise the various features, as and when required, with familiarity and ease. It will lead to more informed purchasing decisions, create a demand for quality and safety, and a more sustainable future.

BIS has one of its goals to enhance and intensify its engagement with the important stakeholders in the implementation of standards and been looking for partners, who can help it in this important enterprise. Consumer Organizations and NGOs are seen as potent partners to give a bigger reach broaden the ambit and coverage of the outreach activities of the organization and Create a strong network of brand ambassadors for standards and quality. However the NGOs themselves needs to be fully aware of BIS activities. Thus there is a need for training the NGOs . Training NGOs on standardization can lead to increased awareness, increase in demand for quality products , improved collaboration, and improved safety and quality.

28.2 Training Objectives

a) To impart updated knowledge on BIS activities
b) How the information can be disseminated amongst various stakeholders

28.3 Course Structure

a) Overview of BIS activities
b) BIS Act, Rules and Regulations
c) QCOs
d) BIS care app

28.4 Target participants

NGOs. Consumers ,

28.5 Frequency and Batch Size

No of Programmes in a year – 12 , duration of 1 days with batch size 20 (Min) - 40 (Max) participants

28.6 Resource Person / Faculty

Competent personnel from BIS

28.7 Training Methodology

Classroom based with lectures, presentations, videos and interactive workshops.

28.8 Continual Improvement

The Coordination Committee shall evaluate each phase of the trainings through feedbacks, assessments, follow ups, etc, so as to make sure it has achieved its aim in terms of subsequent work performance and recommend necessary revisions for continual improvement of the training solutions.

29 Training Programme for BIS Scientific Officers

29.1 Induction Training Program for newly recruited Scientist –B officers

29.1.1 Introduction

The Bureau shall organize Induction training program for the newly recruited Scientist B. The Bureau intends to train the new recruits into flag-bearers of quality who would inculcate and propagate the quality consciousness among Industry.

For successful on-boarding of these recruits in the BIS family, they are provided training in the various aspects of the activities and functions of BIS. In addition, to inculcate leadership and managerial acumen, training in managerial & leadership skills is provided, as part of personality development program, to better equip them to carry out their roles and responsibilities effectively. Induction training programme is designed in a way that would help the young recruits imbibe these traits.

29.1.2 Content Development Committee

a) Head (CMD)
b) Head (LPPD)
c) Head (SCMD)
d) Director (Administration Department)
e) Director (Finance Department)
f) 01 Representative from NITS

29.1.3 Resource Person / Faculty

Competent personnel from BIS, Industry and academia

29.1.4 Training Methodology

a) Interactive Classroom Sessions.
b) Workshops.

29.2 Refresher Training Courses

29.2.1 Introduction

The Bureau from time to time shall organize Refresher training courses for its scientific officers. Refresher training shall include the specific requirements of periodic training as well as the new developments in the functioning of the organization which includes but is not limited to interface with Public, Consumer, Govt and other stakeholders , Administrative and Disciplinary Skills , Managerial Effectiveness , Enforcement and Legal Aspects , Business Development , Behavioral Aspects, Personality Development, Communication Skills, Leadership Quality and Tactfulness , Global Commerce Activity , Future trends of BIS in the Country , Financial Aspects, GFR etc. ,Product specific exposure for understanding the subject

29.2.2 Content Development Committee

a) Head (CMD)
b) Head (LPPD)
c) Head (SCMD)
d) Director (Administration Department)
e) Director (Finance Department)
f) 01 Representative from NITS

29.2.3 Resource Person / Faculty

Competent personnel from Industry, academia, professional, overseas experts and BIS.

29.2.4 Training Methodology

a) Interactive Classroom Sessions.
b) Workshops.

29.3 Case studies development and writing of case studies

29.3.1 Introduction

Bureau of Indian Standards (BIS) occupies a pivotal position in the quality ecosystem and has a treasure trove of experiences in the area. Case Studies and Success Stories can serve as invaluable assets in experience sharing establishing benefits of the various measures taken by the Bureau for the improvement of the quality ecosystem. Case Studies on failed or deficient ventures provides opportunities for improvement in the system by identifying and implementing the required corrective measures. On the whole, Case Studies can serve as important training and promotional tools that can help enrich the knowledge portal through experience sharing.

BIS is in the process of developing case studies on various activities of the Bureau. Necessary training for the same has been imparted to one batch of officers of the Bureau for preparation of Case Studies in collaboration with the Indian Institute of Lucknow.

29.3.2 Content Development Committee

a) 01 Representative from the Institute
b) 01 Representative from NITS

29.3.3 Resource Person / Faculty

Competent personnel from Academia , Industry, and BIS etc .

29.3.4 Training Methodology

a) Interactive Classroom Sessions.
b) Group exercises and discussions

c) Workshops and Case Studies.

29.4 Leadership Development Program for senior level BIS Scientific officers

29.4.1 Introduction

BIS endeavors to make learning one of the fundamental values of the organization for all its employees through on-the-job trainings, focused training on aspects directly related to efficient discharge of duties and also the general training for enabling overall personality development.

Keeping the objective in mind a Leadership Skills development program shall be organized for the Senior level Scientific officers in partnership with the premier institutes including IITs/IIMs.

29.4.2 Content Development Committee

a) 01 Representative from the Institute
b) 01 Representative from NITS

29.4.3 Resource Person / Faculty

As per the institute who is carrying out the training

29.4.4 Training Methodology

a) Interactive Classroom Sessions.
b) Group exercises and discussions
c) Workshops and Case Studies.

29.5 Program on Project Management and Time Management

29.5.1 Introduction

With BIS constantly pioneering in various aspects of quality domain, Project management and Time Management become the necessary skills to master for workplace success. Project management has final deliverables that are constrained to a finite timescale and budget and time being the most valuable resource, proper time management can help improve productivity and value.

It is being planned to impart the training on these two particulars, to BIS officers, in collaboration with the premier IIMs.

29.5.2 Content Development Committee

c) 01 Representative from the Management Institute
d) 01 Representative from NITS

29.5.3 Resource Person / Faculty

Competent personnel from BIS, Industry, academia, professional and overseas experts. From management institute

29.6 Training Programme for BIS Administrative Cadre Officers

29.6.1 Introduction

The Bureau shall organize training program for the Administration and Finance Cadre officers. The officials are trained in various aspects of the activities and functions of the Bureau.

29.6.2 Course Structure

Sl No.	Name of the Course	Duration	Topics Covered
1	Induction training Module (For JSA/SSA/ASO/AD)	5 Days	• Overview of BIS Act & Regulations • BIS (Terms & Conditions of Service of Employee) • Duties & Responsibility of the post • Office Procedure • File Management • E-Office • Noting Skills • Practical on Drafting • Record management • Conduct Rules & Leave Rules • Joining Time, Probation, etc. • and Financial Rules & Service Rules (FR & SR)
2	Refresher Training Module (For JSA/SSA/ASO/AD)	1 week	• Office Procedure • Record Management • Leave Rules • CCS(CCA) Rules • Conduct Rules • Disciplinary proceedings • E-procurement • Financial Rules & Service Rules (FR & SR) • General Financial Rules (GFR) • Right to Information (RTI)
3	Skill Upgradation (HR) (For JSA/SSA/ASO/AD)	1 week	• Recruitment • Leave Rules • Establishment Rules

Sl No.	Name of the Course	Duration	Topics Covered
			• Departmental Promotion Committee (DPC) • Reservation Rosters • Promotion/MACP/NFG • Seniority & Pay fixation • GFR • Service Book • Handling of Disciplinary proceedings (with case studies) • Any other topic covered for Establishment/HR
4	Skill Upgradation (Finance and Accounts) (For JSA/SSA/ASO/AD)	1 week	• FR & SR • GFR • Goods & Services Tax (GST) • Pension Rules & New Pension Scheme (NPS) • Travelling Allowance, House Rent Allowance (HRA) • Leave Travel Concession (LTC) • TDS & ITR • Processing of Payment/Bills • GPF • Budget • Audit • Any other topic covered for Finance/Accounts
5	Skill Upgradation (General Administration) (For JSA/SSA/ASO/AD)	1 week	• Office Procedure • Noting & Drafting Skills • Purchase Procedure • E-Procurement • Government e-Marketplace (GeM) • Tendering & Contract Management • Inventory Management & Storage Procedure • Prevention of Sexual Harassment of women at workplace • Right to Information (RTI) • Any other topic covered for General Administration
6	Practical Training on Computer (For JSA/SSA/ASO/AD)	1 week	• MS-Excel • MS-Powerpoint

29.6.3 Content Development Committee

a) Director (Admin Department)
b) Director (Finance Department)
c) Director (GSD)
d) 01 Representative from NITS

29.6.4 Resource Person / Faculty e

Competent personnel from BIS, Industry, academia, professional and overseas experts.

29.6.5 Training Methodology

a) Interactive Classroom Sessions.
b) Group exercises and discussions
c) Workshops and Case Studies.

29.7 Foreign exposure visits cum training of BIS officers

29.7.1 Introduction

Bureau of Indian Standards, the National Standards Body, catalyses the growth of national economy and contributes towards robust quality ecosystem through its activities of Standards Formulation and various Conformity Assessment Schemes, duly supported by pan-India Laboratory infrastructure. Human resource is an important component of any organization for delivering services in effective and efficient manner. Exposure visits cum trainings to peer organisations and stakeholders is a proven effective tool for capacity building and shifting attitudes and perceptions. It provides reflective spaces for participants to explore how examples from other peer organisations could be applicable to their own processes. In pursuance to the Training Policy of BIS, foreign exposure visits cum training shall be organised for BIS officers to National Standards Bodies of other countries, stakeholders etc. It shall be endeavored that all the eligible officers are trained at least once in 4 years.

29.7.2 Selection of Officers

Selection of Officers will be done as per Guidelines for Foreign exposure visits cum training of BIS officers.

29.7.3 Duration, Course Structure and Batch Size

Duration, Course Structure and Batch Size will be decided in consultation with the concerned National Standards Bodies of other countries, stakeholders, etc.