

### GUEST LECTURES CONDUCTED BY BIS AT VARIOUS INSTITUTIONS

Name of the Department	Topic of Guest Lecture	Institutes Identified	Date of Lecture	Brief Write up on the lectures held
CED	Standardization of Building Materials	IIT Madras	17 April 2022	BIS delivered the guest lecture on the topic of "Indian Standards on Building Materials" covering the background of standardization. The event was attended by the UG Civil Engineering students of Dr Radhakrishna Pillai, Associate Professor, IIT Madras
CED	Standardization of Building Materials	Anna University	13 June 2022	Civil Engg Dept delivered the guest lecture on the topic of "Indian Standards on Building Materials" covering the background of standardization.
CHD	Standards related to Safety and Hazards in Process Industries	IIT Roorkee	24 June 2022	<p>BIS delivered a technical guest lecture on the topic "Standards related to safety and hazards in process industries" which was attended by the students and faculties. During the technical session the audience were apprised on the following:</p> <ol style="list-style-type: none"> <li>1) Different types of Hazards in Process Industries - Physical, Chemical, and Biological Hazards.</li> <li>2) Effects of these Hazards on all form of life</li> <li>3) Few recent incidents of accidents in chemical industries</li> <li>4) Overview of International Standardization in field of Safety and hazards in process industries</li> <li>5) Brief about technical aspects of ISO 45001:2018 Occupational health and safety management systems — Requirements with guidance for use</li> <li>6) About BIS</li> <li>7) Process of standard formulation and type of standards</li> <li>8) Overview of Chemical Hazards (CHD 7) and CHD 8 Occupational Health &amp; Safety Sectional Committee</li> <li>9) Indian standards on Code of Safety of Radiochemical Laboratories and Chemical Laboratories</li> <li>10) Brief about Material Safety Data Sheet(MSDS)</li> <li>11) Indian Standards related to Specification for Eye - Protectors, respiratory protective devices.</li> </ol> <p>The session was followed by a brief Q &amp; A.</p>
ETD	Standardization in Electrical Machines including Transformers and Motors	IIT BHU	25 February 2022	<p>A technical guest lecture was conducted on 'Standardization in Electrical Machines including Transformers and Motors' to the students of IIT BHU, Varanasi on 25th February 2022 where students were apprised of the following:</p> <ul style="list-style-type: none"> <li>- About BIS</li> <li>- Standards &amp; importance of participation in standardization.</li> <li>- Process of standard formulation and types of standards</li> <li>- Overview of Electrotechnical Division Council &amp; Transformers Sectional Committee, ETD 16 and Rotating Machinery Sectional Committee, ETD 15.</li> <li>- Indian standards on Single phase and three phase motors and requirements specified in the standards</li> <li>- Indian Standards on Distribution and Power Transformers and requirements specified in the standards</li> </ul> <p>The session was followed by a brief Q&amp;A.</p> <p>The students were encouraged to get in touch with BIS and they were also informed that they can request for any draft standards under development for providing comments and can also propose for new subjects for standard formulation.</p>

ETD	Standardization on Safety of Electrical Installations	IIT Guwahati	05-May-22	<p>A technical guest lecture was conducted on 'Standardization in Safety of Electrical Installations' to the students of IIT Guwahati on 05th May 2022 where students were apprised of the following:</p> <ul style="list-style-type: none"> <li>- About BIS</li> <li>- Standards &amp; importance of participation in standardization.</li> <li>- Process of standard formulation and types of standards</li> <li>- Overview of Electrotechnical Division Council &amp; Safety of Electrical Installations Sectional Committee, ETD 20.</li> <li>- Indian standards on IS 732 and IS 3043</li> </ul> <p>The session was followed by a brief Q&amp;A.</p> <p>The students were encouraged to get in touch with BIS and they were also informed that they can request for any draft standards under development for providing comments and can also propose for new subjects for standard formulation.</p>
FAD	Indian Standards for analyzing microbiological safety of food products	National Institute of Food Technology Entrepreneurship and Management (NIFTEM), Sonapat	26 March 2022	<p>BIS conducted the Guest Lecture on 26 March 2022, virtually for the students of NIFTEM, Sonapat. The lecture series was inaugurated by Vice Chancellor, NIFTEM and was for 2 hours duration. More than 90 students of B. Tech, M.Tech and Ph.D students attended. The Indian Standards on Microbiological methods of tests, their use and relevance in analysis of microbiological safety of food products encompassing following categories were discussed by Ms. Varsha Gupta, Sc.-D, FAD :</p> <ul style="list-style-type: none"> <li>i) Horizontal methods for enumeration of microorganisms by pour plate and surface plate methods.</li> <li>ii) Methods for detection and enumeration of various microorganisms in food chain and in animal feeding stuff, like, Escherichia coli, Staphylococcus aureus, Salmonella, Vibrio cholera, Vibrio parahaemolyticus etc.</li> <li>iii) Preparation of test samples, initial suspension and decimal dilutions for microbiological examination;</li> <li>iv) Polymerase chain reaction (PCR &amp; qRT-PCR) based method for the detection of food borne pathogens;</li> <li>v) Sampling Techniques (Primary Production Stage) for Microbiological Analysis;</li> <li>vi) Method Validation (of Microbiological Methods);</li> <li>vii) Specific Requirements and Guidance for Proficiency Testing by Interlaboratory Comparison;</li> <li>viii) Preparation, Production, Storage and Performance Testing of Culture Media</li> </ul> <p>A brief introduction of Bureau of Indian Standards was also provided in the handout. Various questions were asked after the session. This initiative of BIS as well as the lecture was appreciated by the host institute as it not only imparted knowledge on the subject discussed through Indian Standards but also developed a better understanding on Standards Formulation activity of BIS. They expressed their willingness to conduct more such programmes, preferably in physical mode, in future.</p>
LITD	IT Software Asset Management and IT Service Management	IIT Tirupati	3 March 2022	<p>BIS conducted the Guest lecture titled 'IT Software Asset Management and IT Service Management' on 03 March 2022 for the students of IIT Tirupati (virtually). During the lecture, the students were informed about the importance of Management System Standards and how ITAM (IS 16419 series) of standards are implemented by IT companies to manage IT infrastructure. More than 90 B. Tech, M.Tech and Ph.D students attended the Guest Lecture.</p>

<b>LITD</b>	Standardization on 'Emerging digital technologies'	IIT Bhilai/SRM Chennai	11 April 2022	<p>The lecture covered the standardisation landscape of information technologies and emerging digital technologies and it further highlighted the need for standardisation in the area of IT and emerging technologies.</p> <p>Mr Manikandan K, Scientist-D, Electronics and IT Department, BIS delivered the lecture (on 11 Apr 2022). The lecture was attended by around 40 students and faculty members of IIT Bhilai. The IIT Bhilai team appreciated the presentation from BIS.</p> <p>During the interactive session after the lecture, the faculties from IIT Bhilai expressed their interest in actively involving the standardization activities of BIS and further informed that they have three tiers of experts 1. Senior professors with broader perspectives (who would like to be a member of the sectional committees in the respective subject area), 2. Faculties who can be part of different panels under BIS sectional committees with a focus on drafting standards; and 3. Other faculties and students who can be involved in the various projects and pilot programmes.</p> <p>It was further agreed by BIS and IIT Bhilai team to have a physical interactive session in May where BIS and IIT Bhilai can discuss in detail about strengthening the involvement of IIT Bhilai in the BIS standards development activities.</p>
<b>MED</b>	Standardization in Refrigeration and Air Conditioning	IIT Roorkee	2 February 2022	<p>BIS conducted the guest lecture on 'Standardization in Refrigeration and Air Conditioning' to the students of IIT Roorkee on 2nd Feb 2022 where students were apprised of the following:</p> <ul style="list-style-type: none"> <li>• About BIS</li> <li>• Standards &amp; importance of participation in standardization.</li> <li>• Process of standard formulation and types of standards</li> <li>• Overview of Mechanical Engineering Division Council &amp; Refrigeration and Air Conditioning Sectional Committee, MED 03.</li> <li>• Indian standards on refrigeration and air conditioning.</li> <li>• National and International Framework for Sustainable Cooling.</li> <li>• Refrigerant Selection.</li> <li>• Details of Indian Standards</li> <li>• Details of the Study on natural refrigerant by IIT Delhi for the development of Indian Standard</li> </ul> <p>The session was followed by a brief Q&amp;A.</p> <p>Dr. Ravi Kumar, Professor at IIT Roorkee and also the Chairman of the MED 03 sectional committee acknowledged the initiative of BIS in spreading awareness of standards. The students were encouraged to get in touch with BIS through the Chairman and they were also informed they can request for any draft standards under development for providing comments."</p>

<b>MED</b>	Standardization in Refrigeration and Air Conditioning	IIT Delhi/ Anna University Chennai	IIT Delhi on 2nd March 2022 IIT Madras and Anna University, Chennai on 4th March 2022	<p>1. A technical guest lecture was conducted on 'Standardization in Refrigeration and Air Conditioning' to the students of IIT Delhi on 2nd March 2022 where students were apprised on the following:</p> <ul style="list-style-type: none"> <li>About BIS</li> <li>Standards &amp; importance of participation in standardization.</li> <li>Process of standard formulation and types of standards</li> <li>Overview of Mechanical Engineering Division Council &amp; Refrigeration and Air Conditioning Sectional Committee, MED</li> </ul> <p>03.</p> <ul style="list-style-type: none"> <li>Indian standards on refrigeration and air conditioning.</li> <li>National and International Framework for Sustainable Cooling.</li> <li>Refrigerant Selection.</li> <li>Details of Indian Standards on A3 refrigerants</li> <li>Details of the Study on natural refrigerant by IIT Delhi for development of Indian Standard</li> </ul> <p>Dr. Krishna Kant Agarwal of IIT Delhi also spoke on the "CFD analysis of dispersion and risk assessment while using flammable refrigerants (Category A3) in split air-conditioners/heat pumps under Indian conditions" under the UNEP component for Framing Relevant National Standards for RAC sector which forms part of the non-investment component of India's HPMP Stage – II under the Ministry of Environment, Forest and Climate Change.</p> <p>The session was followed by a brief Q&amp;A. The students were invited to participate in standardization and participate as an observer in technical committee meetings to know more about the process. They were also requested to suggest R&amp;D projects on refrigeration and air conditioning the end result of which can be used for standard development.</p> <p>2. A technical guest lecture was conducted on 'Standardization in Refrigeration and Air Conditioning' to the students of IIT Madras and Anna University, Chennai on 4th March 2022 where students were apprised on the following:</p> <ul style="list-style-type: none"> <li>About BIS</li> <li>Standards &amp; importance of participation in standardization.</li> <li>Process of standard formulation and types of standards</li> </ul>
<b>MHD</b>	Guest Lecture on Indian Standards for the Biological Evaluation of Medical Devices	Saveetha (Autonomous) Engineering College, Chennai, India Affiliated to Anna University, Chennai	10 June 2022	<p>BIS organized a guest lecture entitled "Indian Standards for the Biological Evaluation of Medical Devices" which was attended by around 25 students and researchers. This lecture has been organized in correspondence to the B.E., Biomedical Engineering and M.E., Medical Electronics BM8072 Biomaterials (Anna University Syllabus) Course.</p> <p>During the guest lecture, technical presentation on the Indian Standard series IS/ ISO 10993 was elaborated, highlighting the need and significance in ensuring the biocompatibility of the medical device. The procedure for assessment, evaluation and control of the risk associated with the exposure to the medical device was explained. The various assessment test like cytotoxicity, genotoxicity, carcinogenicity, Hemocompatibility, Implantation, Sterilization residue, Skin sensitization, Potential degradation and leachables were appraised.</p> <p>Outcome:</p> <p>The students and researchers were able to understand and appreciate the Indian standard IS/ ISO 10993 series and their applicability in their projects for the design of medical devices.</p>

<b>MTD</b>	Indian Standards for Mechanical Testing of materials	IIT Roorkee	17 February 2022	<p>BIS conducted a virtual guest lecture on 'Indian Standards on Mechanical Testing of Metals' for the students of IIT Roorkee on 17th February, 2022. Nearly 60 students including faculty attended the session.</p> <p>Shri Arun Pucchakayala started the session by giving insights of the standards formulation activity at BIS, need of standardization, international presence of BIS in standards formulation activities, etc.</p> <p>Further, Shri Vishal Kumar Rana presented a brief ppt on Indian standards on Mechanical testing. Insights of the technical session:</p> <ul style="list-style-type: none"> <li>• Dissemination of information on important standards which are widely used by the industries for determining the mechanical properties of the metals like tensile testing, hardness testing, toughness testing e.g. IS 1608(several parts), IS 1500(several parts), IS 1501(several parts) which are also closely related to curriculum of engineering students.</li> <li>• Brief explanation of standards by elucidating on various salient features of a standard i.e., scope, test specimen-shape, size, dimensions &amp; preparation; principle of test, machines used, presentation of test results.</li> </ul> <p>After the brief technical session, Shri Dushyant Hawelikar introduced all the participants to the various facets of eBIS portal - one stop solution for all activities of BIS thereby explaining how to propose a new subject for standardization; demonstration of BIS CARE app; different quality assurance marks of BIS; presence of BIS on social networks like youtube, facebook, instagram &amp; twitter;</p> <p>During Q&amp;A session, questions asked by all the curious minds were answered thoroughly.</p> <p>Before concluding session, Head MMED, IITR Shri B.S.S. Daniel praised BIS for organizing the session exclusively designed for the benefit of the students. He also expressed the willingness to collaborate in such programmes, preferably in physical mode, in future.</p>
<b>PCD</b>	Indian Standards related to petroleum products	IIT Roorkee	25 January 2022	<p>A guest lecture was organized for the students of IIT, Roorkee studying petroleum products and petrochemicals as a subject, on 25 January 2022, virtually. It was a session of 75 minutes. The lecture was attended by 110 participants including the students of B.Tech, M.Tech, Ph.D students and faculty. Smt Nagamani.T, Sc E &amp; Head(PCD) in her lecture informed about the standardization process, Indian Standards published for various petroleum products, petrochemicals and related products by the relevant technical Committees of BIS and Indian Standards published for various automotive fuels, including petroleum based (petrol, diesel, LPG, CNG), biofuels (ethanol blended motor gasolines, biodiesel and biodiesel blended diesel, biogas, biojet fuel) and synthetic fuels (dimethyl ether, methanol blended motor gasoline, HCNG and Hydrogen) were also informed.</p> <p>Provisions of IS 1460: 2017 Automotive Diesel Fuel-Specification (sixth revision) and IS 2796:2017 Motor Gasoline-Specification (sixth revision) were explained to the participants. Importance of these fuel specifications, how they had evolved with time, their critical requirements and the aspects that are looked into by the technical Committee, while reviewing these fuel specifications were apprised. The relevant regulations were also informed to them. An overview about the gaseous automotive fuels specifications of LPG (IS 14860) and CNG (IS 15958) was also informed.</p> <p>The queries raised were aptly answered. Dr Vimal Chandra Srivastava, Head, Department of Chemical Engineering opined that the session is very informative and useful for their students and expressed their interest to continue such lectures with BIS, in future.</p>
<b>PGD</b>	Engineering Drawing	IIT Delhi	7 March 2022	<p>A technical lecture was arranged by BIS for the students of Mechanical Engineering Deptt. of IIT, Delhi on 07 March 2022 for 90 minutes at 2:00 PM. Around 70 students participated in the lecture virtually.</p> <p>During the session, Mr Navindra Gautam, Head (PGD) covered the following topics: - Structure of BIS; - Definition &amp; types of Standards; - Significance of Standards; - Standards formulation procedure; - Subjects being covered in PGD; - Overview of Drawings Sectional Committee, PGD-24 with emphasis on international standards. Following the above lecture, Prof S.R. Kale, Chairman of PGD-24 &amp; Ex-HOD of Mechanical Engg. Department, IITD, Delhi gave presentation on the following: - Standardization of Drawings; - Important Standards of drawing that are significant to Mechanical Engineers; - IS 10714 (part-34) General Principles of presentation, views of Mechanical Engg Drawings wherein he covered the significance of perfect flatness, perfect roundness, perfect straightness, etc; The session was concluded by R.K. Pandey, IIT, Delhi with vote of thanks to BIS &amp; Prof Kale.</p>

<b>SSD-I</b>	Standardization of Service Requirements for Hotels	IHM PUSA, New Delhi	4 Februray 2022	A technical guest lecture on 'Standardization of Service Requirements for Hotels' was conducted for students of IHM, PUSA on 4th February 2022. Smt. Shikha Rana briefed the students about standards formulation activity of BIS, need of standardization, international presence of BIS in standards formulation activities and standard on Service requirement for hotels elucidating quality requirements and recommendations for hotels regarding staff, service, events, entertainment activities, safety and security, maintenance, cleanliness, supply management and guest satisfaction.
<b>TED</b>	Indian Standards for Vehicle dynamics including automotive tyres, suspension, steering, etc.	ARAI, Pune	15 Februray 2022	During the Guest Lecture on the topic of Standardization of Tyres, Tubes Wheel Rims and Suspension systems, which was held on 15.02.2022, the students of ARAI, Pune were explained about the national standardization process and the benefits accruing to various stakeholders by actively participating in it. The students were also explained about the standards related to tyres and tubes and the comparison of Indian Standards on tyres and tube with International standards. The standards related to various components of Automotive Suspension system were also explained to the students. The lecture was appreciated both by the faculty members and the students of ARAI.
<b>TXD</b>	Standardization in the field of Medtech (Medical textiles)	NITRA Ghaziabad	18 February 2022	Academia is the learning ground for the young minds of the society who become the leaders for tomorrow for future standardization and build a society with quality consciousness. As a part of new initiative by Bureau of Indian Standards, Textiles department delivered guest lectures on "Standardization in the Field of Medical Textiles" to enhance the knowledge and awareness among students (B. Tech) on Friday, 18 February 2022 at Northern India Textile Research Association (NITRA), Ghaziabad. The lecture was attended by about 60 students and NITRA officials.
<b>TXD</b>	Standardization in the field of Protech (Protective Clothing)	Uttar Pradesh Textile Technology Institute (UPTTI), Kanpur	5 April 2022	<p>Academia is the learning ground for the young minds of the society who become the leaders for tomorrow for future standardization and build a society with quality consciousness.</p> <p>As a part of new initiative by Bureau of Indian Standards, Textiles department delivered guest lectures on "Standardization in the Field of Protective Textiles" to enhance the knowledge and awareness among students (B. Tech/M.Tech/PhD) on Tuesday, April 5, 2022 at Uttar Pradesh Textile Technology Institute (UPTTI), Kanpur. The lecture was attended by about 110 students and UPTTI officials.</p> <p>The students and UPTTI officials were apprised of the following important aspects about BIS : –</p> <ul style="list-style-type: none"> <li>• An overview of BIS Activity</li> <li>• Standards &amp; importance of participation in standardization work.</li> <li>• Structure for Standards Development</li> <li>• Process of standard formulation and types of standards</li> <li>• Overview of work carried out by Textiles Division Council</li> <li>• New initiatives taken by BIS for Digitization of Standardization Activity and Standards Development</li> <li>• Salient features, performance requirement and test method of Important Indian Standards on Protective Clothing under TXD 32 (e.g IS 17051 : 2018, Bullet Resistant Jacket, IS 16890 : 2018 Protective clothing for firefighter clothing, IS 15809 : 2018, High Visibility Warning Clothing, IS 15748 : 2022 Protective clothing against heat and flame, IS 16874 : 2018, Protective Gloves for Firefighter etc..)</li> </ul> <p>The session was followed by a brief Q &amp; A and all the queries raised by students and faculty members were resolved. The lecture and the new initiative of BIS was well appreciated by officials and the students of UPTTI. The lecture was helpful for students/officials for their knowledge enhancement and awareness on various activities being carried out by BIS. It was informed that Indigenous Indian Standards have been made freely downloadable from BIS website which can be utilized by students/faculty members for their study/research work.</p>
<b>WRD</b>	Indian Standards in Hydrometry	IIT Jodhpur	30 March 2022	Guest lecture was organised by WRD in IIT Jodhpur explaining the Standardization process need and how standardization is carried out in Water Resources Department, BIS and briefed about the Standardization in Hydrometry Sectional Committee WRD 01 and also explain the E bis portal, proposal of new subject and different quality assurance marks of BIS like ISI mark, eco mark, registration mark, hallmark and in last about BIS care app. There was a good participation of 90+ faculty and students.