



GOVERNMENT OF INDIA
MINISTRY OF LABOUR AND EMPLOYMENT
DIRECTORATE GENERAL FACTORY ADVICE SERVICE AND LABOUR INSTITUTES
CENTRAL LABOUR INSTITUTE
N.S. MANKIKAR MARG, SION, MUMBAI - 400022

INFORMATION BROCHURE CUM APPLICATION FORM FOR
THREE MONTHS TRAINING PROGRAMME IN INDUSTRIAL HEALTH
“ASSOCIATE FELLOW OF INDUSTRIAL HEALTH” (AFIH) – December - 2024

Application /Brochure published date	23.10.2024
Last date for receipt of the application form by registered/speed post to Central Labour Institute, Mumbai	08.11.2024
List of the provisionally eligible and waitlisted candidates will be published on DGFASLI website www.dgfasli.gov.in	On or before 11.11.2024
Physical Verification of the original documents followed by admission and fees deposition for Rank 1 to 50 as per merit list	18.11.2024 to 19.11.2024 (11:00 Hrs to 17:00 Hrs).
No of vacant seats will be published on DGFASLI website	On or before 20.11.2024
Admission to vacant seats shall be done strictly as per the order of merit for all waitlisted candidates	26.11.2024 (Reporting time 11:00 Hrs).
Duration of the training program	02.12.2024 - 28.02.2025
Venue of the training program	Central Labour Institute, N.S. Mankikar Marg, Sion, Mumbai

APPLICATION PROCEDURE:

- Competency based course curriculum for training program is enclosed herewith the application form. Interested candidates shall apply in prescribed application form along with self-attested copies of necessary documents through **speed post only** to “The Director, Industrial Medicine Division, 2nd Floor, Admin Building, Central Labour Institute, N.S. Mankikar Marg, Sion, Mumbai – 400022.
- On the outer envelope, it shall be clearly written as: **“APPLICATION FOR AFIH DECEMBER - 2024”**
- Last date for receipt of the application form by speed post to the Central Labour Institute, Mumbai is **08.11.2024**
- Physical Verification of the original documents followed by admission and fees deposition for Rank1 to 50 as per merit list will be conducted on **18.11.2024 to 19.11.2024** (11:00 Hrs to 17:00 Hrs). If a candidate up to Rank-50, does not take the admission till 17:00 Hrs on 19.11.2024, his/her candidature will automatically be cancelled and

seat will be allotted to the waitlisted candidate as per merit list and no request will be entertained and no correspondence will be made in this regard in any circumstances. During admission, the physical appearance of the candidate with all original documents is essential and no authorization to any other person will be entertained in this regard in any circumstances.

- In case of working candidates, No Objection Certificate from the current employer needs to be submitted. Application without NOC will not be considered.
- Incomplete applications will be summarily rejected.
- Number of vacant seats will be published on DGFASLI website on or before 20.11.2024. Admission to vacant seats shall be done strictly as per the order of merit of waitlisted candidates on **26.11.2024** (Reporting time for all waitlisted candidates is 11:00 Hrs) by appearing physically for physical verification of all original documents. Candidates reporting beyond stipulated date and timing would not be considered eligible for admission. Candidature for the rest of the candidates will automatically be cancelled, and no request will be entertained, and no correspondence will be made, in this regard in any circumstances.
- No TA/DA etc will be provided to attend the document verification/admission/ Reporting/Open Round Counseling or for any other purpose.
- Information related to admission/selection or any other matter for this training program will be notified/ updated on the Notice Board of Central Labour Institute, Mumbai and DGFASLI website (<https://dgfasli.gov.in/>) from time to time.
- The admission process will end on 26.11.2024 by 18:00 Hrs.
- AFIH program will commence from 02.12.2024.

ESSENTIAL ELIGIBILITY CRITERIA FOR ADMISSION:

1. Candidates in possession of recognised medical qualification MBBS as per the provisions of the National Medical Commission (NMC) Act, 2019 and the repealed Indian Medical Council (MCI) Act, 1956.
2. Completed one year of internship period.
3. Possessing medical registration certificate, permanent/renewed as applicable as per state medical council/Medical Council of India.
4. Minimum two years working experience (as on the date 31.10.2024) in any establishment after completion of the compulsory internship period. Contractor's Experience certificate will not be considered.

The period spent on higher studies in the field of modern medicine i.e. recognised postgraduate medical degree/diploma (MD/MS/DNB/Diploma) or an equivalent recognised medical qualification as per provisions of the NMC Act 2019 and the repealed Indian Medical Council Act 1956 shall be considered as working experience.

SELECTION CRITERIA FOR ADMISSION:

After completion of the compulsory internship period,

1. Two (2) marks will be given for each completed year of working experience in Factory, Mines, Dock Works, Construction Work, and Plantation Work.
2. One (1) mark will be given for each completed year of working experience other than Factory, Mines, Dock Works, Construction Work and Plantation Work or period spent on higher studies in the field of modern medicine i.e. recognised postgraduate medical degree/diploma (MD/MS/DNB/Diploma) or an equivalent recognised medical

Qualification as per provisions of the NMC Act 2019 and the repealed Indian Medical Council Act 1956.

3. TIE PRINCIPLE –Wherever two or more candidates have secured equal aggregate marks, these tie(s) is/are resolved in accordance with the principles as mentioned below,
- Priority1: Age-Senior will be in the upper order of merit.
 - Priority2: Date/Year of Completion of the Internship-Earlier the date/year of completion of internship will be in the upper order of merit.
4. REJECTION CRITERIA The applications which are not complete in all respects, as mentioned in the Information Brochure and Application Form, will be rejected and no communication will be made to the individual regarding the rejection of the application. The decision of the Institute, on all matters connected with the selection, admission, examination and any other matters related with Course is the final.

IMPORTANT INFORMATION:

- Only after verification of all documents with original copy and submission of required papers, the provisionally selected candidates will be allowed to deposit fees as per the details given below:
- Fees for the Training Program: On the day of admission to the course, the provisionally selected candidates will have to deposit institute fees by online payment of Rs. 25,000/- (Non-refundable) through Bharatkosh portal.

Procedure for making payment through Bharat Kosh:

- Visit to <https://bharatkosh.gov.in> and
- Click on Quick Payment and fill the details as below to proceed for online payment,
- Ministry: 021 Labour & Employment
- Purpose: Training fee or Course fee of the workshop conducted
- Pay & Account Office (PAO): 030263 - PAO (DGFASLI), Mumbai
- Drawing & Disbursing Office(DDO):230265 - Administrative Officer, CTI Building, Central Labour Institute, Mumbai - 400022
- Remarks: "AFIH CLI – December- 2024"
- Provisional admission will be granted based on the information/documents furnished by the Candidates as per their application form and during the admission process. In case of any credentials/information/document/certificate etc. being detected or identified or being noticed at any point as false/fabricated/tampered/misleading, his/her candidature and certificate are liable to be cancelled and the fees paid will not be refunded. Appropriate action in this regard will be initiated by the Director in Charge/Head of Office.
- All the students are required to bring TWO passport-size photographs and one set of self-attested photocopies of all documents/certificates/testimonials including educational & experience certificates along with originals.
- Candidates must attend the classes regularly and shall have minimum of 80% attendance inclusive of theory, practical, industrial visit, project work etc. Candidates with shortfall of 80% attendance will be debarred from appearing the examination.
- All students are required to adhere to the uniform dress code for doctors i.e. White Apron.

- The expenses towards Food/Stay/Industry Visits/Project Work/Term Work/Examination fees/Lab Reports Books, /Stationeries/copies of study materials/handouts/lectures/ notes and other assignments, etc as part of the curriculum have to be borne by the candidate himself/herself/sponsoring organization.
- The classes will be held from 10 am to 05 pm on all working days (Monday to Friday). Students are expected to devote their full time to the course.
- During the tenure of the course, students are required to keep track of the different components of the training program. The Institute will not be responsible if any deadline is missed by the student.
- Any kind of indiscipline/uncivilized behaviour and unparliamentarily language in the Institute and campus shall be dealt with strictly and disciplinary action will be initiated by the competent authority.
- There shall be a total ban on any act of ragging performed directly or indirectly by any student of the institute. No student shall commit, abet, propagate, or participate directly or indirectly in ragging in or outside the institute.
- Every student is required to observe discipline and maintain decorous behavior both inside and outside the Institute and not to indulge in any activity which will tend to bring down the prestige of the Institute and against the professional ethics of the medical practitioners. The Director in Charge will constitute a disciplinary committee to enquire into acts of Indiscipline/misconduct. Appropriate action will be taken and communicated to the appropriate authority or organization based on the findings of the disciplinary committee. If a student indulges in malpractice, he/she shall be liable for punitive action as prescribed by the Institute from time to time.
- For any matter related to this training program, the Decision of the Competent Authority of the DGFASLI or Central Labour Institute, Mumbai as applicable/appropriate shall be final.

HOSTEL ACCOMMODATION:

At present hostel accommodation facility is not available in the institute.

Program Coordinator

Dr. S. Saini

Director (Medical)

Central Labour Institute, DGFASLI,

N.S. Mankikar Marg, Sion, Mumbai – 400022

E-mail: ss@dgfasli.nic.in

FOR MORE DETAILS, PLEASE GO THROUGH THE COMPETENCY BASED COURSE CURRICULUM AND GUIDELINES FOR THE TRAINING PROGRAMME PUBLISHED BY DGFASLI, AVAILABLE IN THE DGFASLI WEBSITE(<https://bit.ly/afih-2024-dgfasli>) OR CONTACT THE PROGRAM COORDINATOR

GOVERNMENT OF INDIA
 MINISTRY OF LABOUR AND EMPLOYMENT
 DIRECTORATE GENERAL FACTORY ADVICE SERVICE AND LABOUR INSTITUTES
 CENTRAL LABOUR INSTITUTE, MUMBAI

APPLICATION FORM - AFIH DECEMBER -2024

**APPLICATION FORM FOR ADMISSION TO THREE MONTHS TRAINING PROGRAMME IN INDUSTRIAL HEALTH, LEADING TO CERTIFICATE OF
 “ASSOCIATE FELLOW OF INDUSTRIAL HEALTH” (AFIH)**

1. Name (English, Capital letters) : As per Latest NMC/MCI/State Medical Council Registration
 (Hindi) :
2. Male/Female/Prefer Not to Say :
3. Date of Birth (DD-MM-YYYY): :
4. Address as per AADHAAR Card of the Applicant:
5. Mobile Number of the Applicant:
6. E-mail of the applicant:
7. MBBS (or Equivalent) Degree Certificate and Name of the University/Institute:
8. Date (DD-MM-YYYY) of Internship Completion:
9. MBBS (or Equivalent) Professional Registration Number as per NMC/MCI and name of the Registering Body (NMC/MCI/Name of the State Medical Council):
10. Experience after completion of internship (attach self-attested copies of experience certificates from organization/employers) (Cutoff date to calculate experience is 31-10-2024).



Name of the Organization/Industry (Contractor's certificate will not be accepted)	Duration		Experience in Completed Year	Please Categorically mention Working experience in Factory/Mines/Dock Works/ Construction Work/Plantation Work or other establishment as applicable	Experience Certificate as applicable: Enclosed (YES/NO)
	From (DD-MM-YYYY)	To (DD-MM-YYYY)			

- Total Experience (Completed Years only) in Factory/Mines/Dock Works/ Construction Work/Plantation Work:YEAR
- Total Experience (Completed Years only) in other Establishment:.....YEAR

11. Postgraduate medical degree/diploma (MD/MS/DNB/Diploma) or an equivalent recognized medical qualifications as per provisions of the NMC Act 2019 and the repealed Indian Medical Council Act 1956

NAME OF THE POST GRADUATE MEDICAL DEGREE (MD/MS/DNB)/ POST GRADUATE MEDICAL DIPLOMA /ANYOTHER EQUIVALENT RECOGNISED MEDICAL QUALIFICATION (PLEASE MENTION SPECIALTY OR SUPER SPECIALTY ALSO)	TRAINING INSTITUTION OF THE POST-GRADUATE MEDICAL QUALIFICATION	BOARD / UNIVERSITY	YEAR OF PASSING	DURATION OF COURSE IN YEARS	IS THE COURSE A RECOGNISED MEDICAL QUALIFICATION AS PER PROVISIONS OF THE NMC ACT 2019 AND THE REPEALED INDIAN MEDICAL COUNCIL ACT 1956 OR EQUIVALENT (YES/NO)

- Total period spent on Postgraduate medical degree/diploma (MD/MS/DNB/Diploma) or an equivalent recognized medical qualification:YEAR

12. DOCUMENTS TO BE ATTACHED WITH THE APPLICATION FORM:

Sl. No	Document Required	Self-Attested Copie(s) of the Document Attached (YES/NO/Not Applicable)
1.	Matriculation/10th Standard or equivalent certificate indicating date of birth, or mark sheet of Matriculation/10th Standard or equivalent issued by Central/State Board indicating Date of Birth.	
2.	AADHAAR CARD of the applicant	
3.	MBBS Degree (or Equivalent) certificate awarded by the University/Medical Institute.	
4.	One-Year Internship Completion Certificate	
5.	MBBS (or Equivalent) Professional Registration Certificate (Renewed as per NMC/MCI/ State Medical Council):	
6.	Experience certificates from organization/employers of Factory/Mines/Dock Works/ Construction Work/Plantation Work. Contractor's certificate will not be considered.	
7.	Experience certificates from establishment other than Factory/Mines/Dock Works/ Construction Work/Plantation Work. Contractor's certificate will not be considered.	
8.	Documents in support Post Graduate Medical Degree (MD/MS/DNB)/Post Graduate Medical Diploma / Any Other NMC or MCI Recognised Post Graduate Medical Qualification/ Equivalent Post Graduate Medical Qualification	
9.	No Objection Certificate (NOC) from current employer.	

13. If any document/ certificate furnished is in a language other than Hindi or English, a transcript of the same duly attested by a Gazetted officer or notary is to be submitted.
14. Appointment letter/Pay slip/offer letter/resignation or termination letter/extension letter will not be accepted as Experience Certificate.
15. The applicants are advised to read the information brochure cum application form, course curriculum and guidelines for eligibility and selection criteria etc very carefully and then fill the application form meticulously as submission of false/fabricated/tampered/misleading/mismatched information may lead to rejection of the application and candidature at any time.

DECLARATION BY THE CANDIDATE

I,....., S/o or D/o..... hereby declare that the information furnished in this application is true and correct and that no material information has been suppressed by me. I also understand that I stand to be disqualified from being admitted to the Course or from continuance in the Course, in the event of any information being found incorrect/false/fabricated/tampered/misleading/mismatched. While pursuing the 3 months training programme in Industrial Health (AFIH), if found involved in any misconduct/misbehaviour during the study period, I will abide by the decision taken by the Central Labour Institute, Mumbai including dismissal from the Course. I undertake to produce all the Original Certificates, Testimonials, etc. regarding my Educational Qualification, Experience, etc., at the time of admission to the course without fail and non-producing of these documents during admission will disqualify me from seeking admission to this training programme. I also declare that my name is currently present in the Indian Medical Register and/or State Medical Register of the NMC/MCI/State Medical Council and is currently not blacklisted by any authority.

Date & place:

Applicant's Name and signature

COMPETENCY BASED COURSE CURRICULUM

ASSOCIATE FELLOW OF INDUSTRIAL HEALTH (AFIH)

GOVERNMENT OF INDIA, MINISTRY OF LABOUR & EMPLOYMENT
DIRECTORATE GENERAL FACTORY ADVICE SERVICE AND LABOUR INSTITUTES
SION | MUMBAI
YEAR 2023

PREFACE

Associate Fellow of Industrial Health (AFIH) course is a statutory training programme which enables Indian registered medical doctors of modern medicine to become a "Factory Medical Officer" who is considered as competent occupational health physician under The Factories Act 1948 and Rules made there under. It is three months, fulltime, regular, certificate course consists of lectures series, laboratory work, practical works, demonstration & tutorial, educational / industry visit, speciality clinical exposure and project work. On completion of the three months training period and after passing the final examination conducted by the AFIH Academic Council, successful delegates are awarded with "ASSOCIATE FELLOW OF INDUSTRIAL HEALTH (AFIH)" certificate, which will fulfil the requirement in terms of additional qualification for appointment of Factory Medical Officers as required under the Factories Act, 1948 and Rules made there under. The practical, tutorial, demonstration activities are integral components of the day-to-day course curriculum with the involvement of multiple disciplines including Industrial Medicine, Industrial Hygiene, Safety, Staff Training and Productivity, Human Physiology, Industrial Psychology, etc. Industrial Medicine and Industrial Hygiene laboratories and practical, field visit to the industries and to their occupational health centres to understand the existing occupational health system are the basic and essential components of the course curriculum.

The objectives of the course are to enable the doctors

- To identify and manage the occupational health disorders / occupational diseases encountered in various industries in the country and to manage the industrial injuries, accidents, illnesses caused by chemical intoxication, in general and in hazardous process industry in particular.
- To suggest preventive and control measures of such occupational health problems.
- To advise, supervise and participate in the national and international programmes on occupational health of industrial workers, improving productivity and prosperity.

The course was introduced in the year 1992 at the Central Labour Institute, Mumbai. Currently, the course is operational at Central Labour Institute, Mumbai and Regional Labour Institutes Chennai, Faridabad, Kanpur and Kolkata and some other reputed institutes are also approved by the DGFASLI for conducting the course. The course is administratively controlled by the Directorate General Factory Advice Service & Labour Institutes (DGFASLI), at the All-India level and is assisted by an advisory body known as AFIH Academic Council.

The underlying concept of competency – i.e., the habitual and consistent use of knowledge, technical skills, clinical reasoning, communication, emotions, values and reflection in daily practice for the benefit of the individual (workers) and the community (industry) being served. ***Competency based course curriculum ensures that the training participants should consistently demonstrate the desired behaviour throughout their professional carrier rather than only during the final examination.*** The new competency-based course curriculum of the AFIH course has been designed to meet the requirements of the industries at national and international level with emphasis on sustainable development.

PROGRAMME GOALS

The goals of this Certificate training programme in Industrial Health namely AFIH are:

- To train groups of medical personnel in Occupational and Environmental Health issues
- To identify/recognize Occupational and/or Environmental Health related problems, undertake investigations and formulate remedial/control measures.
- To provide regular update about recent advances in the field.
- To create skilled medical manpower in the area of Occupational Health management for betterment and upliftment of health and well-being of the community in general and industrial workers in particular.

SPECIFIC LEARNING OBJECTIVES

The AFIH course is to produce a competent medical professional who will be able to:

- apply the skills of a trained medical practitioner to:
 - diagnose and manage disease and injury in relation to occupation
 - determine the relationship between health and fitness to work
 - advise on the effect of major contemporary health issues in workplaces
- conduct workplace and preliminary environmental assessments in order to recognise, evaluate and control physical, chemical, biological, design-related and psychosocial hazards
- retrieve, critically appraise and disseminate occupational and environmental health & safety information in readily understandable terms
- apply management skills in order to:
 - coordinate and manage occupational and environmental health and safety programs, including health surveillance
 - effect relevant change in workplaces
 - negotiate and resolve conflict relating to occupational and environmental health and safety issues
- communicate effectively in order to secure the cooperation of management, employees & colleagues in the provision of a safe and healthy workplace
- be an advocate for health in workplaces and the broader community
- interpret the legislative, regulatory, and medico-legal aspects of occupational & environmental health and safety and be able to apply these in practice
- design, implement and manage a vocational rehabilitation program in the workplace, provide on-hand practical training to recognise health problems related to occupation, confirm the diagnosis and suggest remedial measures, assess the factors responsible for the causation of the health problems in working & general environment conditions
- design, conduct, implement and evaluate preventive strategies in workplaces
impart training in systematic collection of information, compilation and presentation of data, storage, record keeping and retrieval of data in respect of each worker.
- participate in continuing professional development in order to respond to changes in workplaces and keep abreast of the latest developments on occupational and environmental medicine, and health and safety issues
- practical knowledge in computer application and drawing valid conclusions by applying appropriate statistical methodology.
- develop basic skills in public relations, health education and public awareness programme through effective communication and information technology.

SUBJECT SPECIFIC COMPETENCIES

At the end of the course, the delegates should have acquired knowledge in the following:

A. Cognitive Domain

1. Basic knowledge on the structure of the different organ systems of human body, their functions and response to adverse occupational / environmental conditions.
2. Applied aspects of Occupational and Environmental Health.
3. Occupational / Environmental Health Epidemiology and biostatistics.
4. Occupational / Environmental Health disorders and diseases.
5. Biochemical, microbiological, and pathological aspects of Occupational Health
6. Toxicological aspects of Occupational / Environmental exposures.
7. Work physiology – Ergonomics, Biomechanics, and stressors.
8. Basic understanding of Industrial Management, Industrial Hygiene, and Industrial safety
9. Legislation related to Occupational health and safety.
10. Recent Advancement in the field of Occupational Health, Hygiene and Safety

B. Affective Domain:

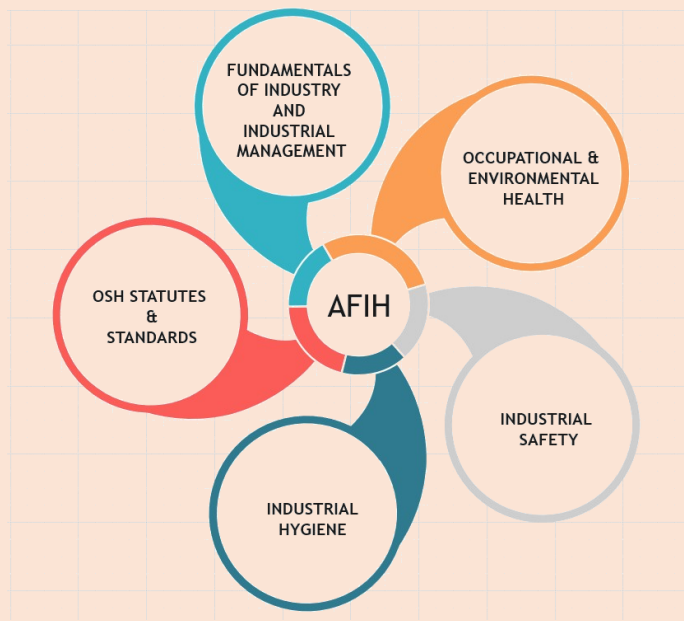
1. The AFIH delegates should be able to function as a part of a team, develop an attitude of cooperation and healthy interact with the workers, occupiers, management, law and order enforcement agencies and other colleagues to provide the best possible occupational service in the industry
2. The AFIH delegates should always adopt ethical principles and maintain proper etiquette in dealings with workers, patients, relatives, and other health personnel and to respect the rights of the workers/patient including the right to information and second opinion.
3. The AFIH delegates should develop communication skills to prepare reports and professional opinion as well as to interact with workers, patients, peers and paramedical staff, occupiers, management, law and order enforcement agencies in a professional way.

C. Psychomotor domain

1. Demonstrate clinical skills of preparing case history, examination, interpretation of laboratory results, provisional diagnosis, and medical management of occupational diseases
2. Conduct pre-medical examination, periodic medical examination and exit medical examination and necessary certification
3. Conduct epidemiological studies and surveys for assessment of health & morbidity profile of the workers, determinants of diseases, assessment of health needs, diseases surveillance, and Planning and implementation of prevention and control measures
4. Do data collection, compilation, tabular and graphical presentation, analysis and interpretation, applying appropriate statistical tests, using computer-based application

SUBJECT WISE SYLLABUS IN DETAILS:

Concept Map of the Syllabus:



TIME MANAGEMENT:

- One Working Day: 10 AM-6 PM
- Number of Sessions per Working Day: 5
- Duration of One Session: 1 Hrs and 15 Minutes (Min)/ 1 Hrs and 30 Minutes (Max)
- Lecture, Tutorial and Practical Training: 40 Working Days (200 Sessions)
- Project Work: 10 Working Days (50 Sessions). The project work is an essential component of the curriculum, the AFIH delegates should be informed and sensitized about it from the very beginning of the course.
- Educational/Industrial Visits/ Specialty Clinical Exposure: 10 Working Days (50 Sessions)
- Total Effective Course Duration: 60 Working Days (300 Sessions) [Min-375 Learning Hours]

STUDY SCHEME:

DOMAIN	NUMBER OF SESSIONS			
	LECTURE / GROUP DISCUSSION/PRESENTATION [L]	TUTORIAL/ DEMONSTRATION [T]	PRACTICAL [P]	TOTAL (200+50+50=300)
A) Fundamentals of Industry and Industrial Management	10	-	-	10
B) Occupational & Environmental Health	85	10	25	120
C) Industrial Safety	15	5	-	20
D) Industrial Hygiene	15	5	10	30
E) OSH Statutes and Standards	20	-	-	20
Lecture, Tutorial and Practical Training	145	20	35	200
Project Work	50			50
Educational/Industrial Visits & Specialty Clinical Exposure	50			50

Course contents In Details:

A. FUNDAMENTALS OF INDUSTRY AND INDUSTRIAL MANAGEMENT: L-10, T-0, P-0

ALLOTTED SESSIONS: 15 SESSIONS		
LECTURE (L)/ GROUP DISCUSSION/PRESENTATION	TUTORIAL (T)/ DEMONSTRATION	PRACTICAL (P)
10	0	0

1. FUNDAMENTALS OF INDUSTRY: L-5, T-0, P-0

What is Industry , its types and Sectors, Industries of India, Industrial Economics, Indices (GDP/GNP etc), The need for industries in country’s development, The Factors of Production in industries (Labour, Land, Capital, Enterprise), What is Labour, Its types, issues, solutions, Organized and Unorganized labour issues, Migrant Workers, Seasonal Workers, Gig Workers, Industry as Organization, Its Hierarchy, the need of doctors in industry, Basic knowledge on the functioning of the different Industries, Interrelation for OSH with Industry’s department of Safety, HR, Welfare, Commerce, Market, Trade Unions, Govt agencies, Community around industry, Importance of Occupational Health for Sustainable Development in Industries, Industry 1.0/2.0/3.0/4.0/5.0, Effect of technical advancement in industrial hazards

2. INDUSTRIAL MANAGEMENT FOR OCCUPATIONAL SAFETY AND HEALTH: L-5, T-0, P-0

General principles of Management, Management Theories, Components: Planning, Organizing, Staffing, Directing, Coordinating, Reporting and Budgeting, Management Structure, Roles and Responsibilities, Authority, Information flow, Reporting Mechanism, Delegation of Power, Public Relation, Concept of productivity, Concepts of Material Management, inventory control & techniques, Concept of Quality, PDCA Cycle, principles of Kaizen, Total Quality Management, Assessment of training needs, Design & development of training programmes, Training methods and strategies, Training programmes for new entrants, Evaluation of training programmes, Communication, Principles, tools and techniques of Effective Communication, IEC & BCC, Occupational Health Audit, Incentives, motivation, leadership traits, skill and types

B. OCCUPATIONAL AND ENVIRONMENTAL HEALTH: L-85, T-10, P-25

ALLOTTED SESSIONS: 110 SESSIONS		
LECTURE (L) / GROUP DISCUSSION/PRESENTATION	TUTORIAL (T)/ DEMONSTRATION	PRACTICAL (P)
85	10	25

1. Concepts of Health & Diseases and History of Occupational Health: L-10, T-0, P-0

Definitions, Determinants of Health, Concepts of Health and Diseases, Basic socio-economic and demographic factors pertinent to occupational health, **Occupational Sociology**, History and development of Occupational Health, International and National Organisations of OSH (MoL&E, DGFASLI, AIIH&PH, ILO, WHO, CDC, ICMR-NIOH, ICOH etc), ILO Conventions, Recommendations, Ratifications, Status of occupational health globally and in India, Sustainable Development Goals, Epidemiology, Epidemiological triad, Theory of Disease Causation, Multifactorial Causation of Occupational Diseases, Association and Causal Relationship, Level of Prevention and Mode of Interventions, Role of Nutrition in Occupational Health. etc

2. Healthcare Delivery System for Community and Industry: L-10, T-0, P-0

Principle and Elements of Primary Health Care, Primary Health Care Approach in Occupational Health (Basic Occupational Health Service), Health Service in India, Role of Governments, Employers, Trade Unions and Employees in OHS, Reportable Diseases and Notifiable Diseases, Functioning of Occupational Health Centre, First Aid Services in Industries, Ambulance service, Medical emergency

response & planning, Role and Responsibilities during in Onsite & Offsite Emergencies, Triage and Reverse Triage, Health Programmes for Prevention of Communicable and Non-Communicable diseases, Hearing Conservation Programme, Prevention of Addiction, Rehabilitation, etc

3. Research Methodology and Biostatistics in Occupational Health: L-10, T-3, P-0

Methods of occupational health studies-descriptive studies, analytical studies, case control and cohort studies, experimental studies, Preparation of questionnaire, Measurements of Mortality and Morbidity: Incidence, prevalence, mortality rate, morbidity rate, man-days lost, absenteeism rate, sampling, sample size, sampling methods, standardization, concept of normal distribution, descriptive statics, inferential statistics, mean, median, mode, standard deviation, inter quartile range, concept of p value, significance testing, Chi2 testing, t- tests, correlation, Application of computers and statistical software of occupational health data analysis, representation of the research results in tables and diagrams, preparation of reports, Reference management, Plagiarism, Research Publication, Important Database and Repository for Occupational health Practice

4. Screening and Diagnosis for Occupational Health: L-10, T-2, P-0

Concept of Screening Tests and Diagnostics Tests, Sensitivity, Specificity, Accuracy, Precision, Positive Predictive Value, Negative Predictive Value, Biomonitoring and exposure assessment for occupational diseases, Occupational Toxicology, Occupational Health Surveillance, Different Diagnostics Modalities in Occupational Health, Imaging Modalities for Occupational Health, Evidence Based Decision Making for Occupational Health Practice, Pre-Employment Medical Examination, Periodic Medical Examination, Pre-Retirement/Exit Medical Examination, Special Medical Examination, Maintenance of health registers and records, Medical Certification to employees (employment, sickness, injuries, return to work) etc

5. Management of Occupational Disorders, Injuries, and Illness: L-25, T-5, P-20

List of Occupational Diseases as per ILO, List of Notifiable Diseases in Factory, Ports, and Mines, Medical Management of Diseases Caused by Chemical Agents: Toxic Gases, Vapours, Toxic Liquids, Metals, Solvents, Organochlorine and organophosphorus compounds, Hydrocarbons, Acids, Alkalis etc , Medical Management of Diseases Caused by Physical factors or Agents: Heat, Noise, Vibration, Humidity, compressed or decompressed Air, Electricity, Radiation, Electromagnetic Waves, Work at Height, Work at High Altitude, Work under Water, Medical Management of Diseases Caused by Biological Agents: Anthrax, Brucellosis, Leptospirosis, Tetanus, Tuberculosis, Hepatitis, HIV, Fungal Infections, Occupational diseases by target organ systems: Occupational Lung Diseases, Occupational Skin Disorder, Occupational Musculo-Skeletal Disorders, Occupational Cancers, Occupational Eye Disorders, behavioural toxicology, Occupational Injuries and Illness Classification, Management of Occupational Injuries and Emergencies, BLS, ACLS, Management of Insect, Animal and Snake Bite, Disability Assessment, etc

6. Environmental Health: L-5, T-0, P-2

Introduction and definitions in Environmental Health, Air Pollution and Workers Health, Air Quality Index, Water Pollution, Environmental Sanitation, Food Safety, Pests and Pesticides, General sanitation, purification of water, water quality assessment, Criteria of Potable Wholesome Drinking water, drinking water supply, Solid waste management, Bio-Medical Waste Management, Environmental Management System, etc

7. Work Physiology, Ergonomics, and Industrial Psychology: L-7, T-0, P-3

Work Physiology, Physical fitness, Heat Stress, Fundamentals of Biomechanics, Introduction to ergonomics, cumulative trauma disorders, stress performance, application of ergonomics in occupational health, anthropometry, principles of work station designing, Introduction to industrial psychology, occupational stress & its management, shift work, Occupational Mental and Neuro-behavioural disorders, occupational health disorders of psychological origin, etc

8. Important National Health Programmes and Recent Advancement in Occupational Health: L-8, T-0, P-0

Brief Introduction to National Health Mission (NHM), Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY), and Important National Programme for TB, HIV, Vector Borne Diseases, Integrated Disease Surveillance Programme (IDSP), National Programme for prevention & Control of Cancer, Diabetes, Cardiovascular Diseases & stroke (NPCDCS), National Mental Health Programme, Recent Diagnostics in Occupational health, Adult Immunization, One Health Approach, Immunologic and genetic biomarkers in occupational health practice, Application of Artificial Intelligence in Occupational Health Practice, Aging and Work, Women at Work, Nanotechnology and Occupational Health, Industrial Automation and Occupational Health, Occupational Health Information Management System, Ethics in Occupational Health, Green House Gases, Carbon footprint, Climate Changes, etc

C. INDUSTRIAL SAFETY: L-15, T-5, P-0

ALLOTTED SESSIONS: 20 SESSIONS		
LECTURE (L)/ GROUP DISCUSSION/PRESENTATION	TUTORIAL (T)/ DEMONSTRATION	PRACTICAL (P)
15	5	0

Definition, Importance, Applicability, Accident causation, Accident and Injury Prevention, safety committee, Control of industrial heat, ventilation, noise, vibration, illumination & color, Radiation Safety, Fire Safety, Electrical Safety, Work Permit System, Safety during Work at Height and Confined Space, Accident investigation & Reporting, Fundamentals of Safety Audit, Introduction to Behavioral Based Safety (BBS), Hazard Identification, Risk Assessment & Mitigation (HIRAM), Case studies of following major accidents- Bhopal, Mexico, Flixborough, Seveso, Chernobyl and Feyzin disasters

D. INDUSTRIAL HYGIENE: L-15, T-5, P-10

ALLOTTED SESSIONS: 30 SESSIONS		
LECTURE (L)/ GROUP DISCUSSION/PRESENTATION	TUTORIAL (T)/ DEMONSTRATION	PRACTICAL (P)
15	5	10

Introduction to Industrial hygiene, organizing Industrial hygiene service, Hierarchy of Control, Concepts of safe working limits (TLV –TWA, STEL, PEL, REL, BEI, IDLH, LC 50, LD50, etc), MSDS, Workplace Airborne contaminants and monitoring, Assessment and monitoring of Industrial ventilation, heat & heat stress indices, humidity, noise, illumination & color, vibration, radiation, Respiratory and Non-Respiratory Personal Protective Equipment-Types, Standards and Selection

E. OCCUPATIONAL SAFETY & HEALTH STATUTES & STANDARDS: L-20, T-0, P-0

ALLOTTED SESSIONS: 20 SESSIONS		
LECTURE (L)/ GROUP DISCUSSION/PRESENTATION	TUTORIAL (T)/ DEMONSTRATION	PRACTICAL (P)
20	0	0

National Policy on OSH, Factories Act 1948 and The Factories Rules, The Dock Workers (Safety, Health & Welfare) Act and Regulations, Building and other construction work Act & Rules, Environmental Protection Act 1986-MSIHC Rules, CIMAH Rules, ESI Act, The Mines Act, Employees Compensation Act, Maternity Benefit Act, Insecticides Act, The Child and Adolescent Labour (Prohibition & Regulation) Act and Introduction to New Labour Codes, Introduction to National and International Standards, BIS, OISD, ISO, OSHA, NIOSH

PROJECT WORK: 50 Sessions

The Project work shall be original work in the field of occupational health domain involving workers as study participants in registered Factory, Mines, Dock Works, Construction Work and Plantation Work under the respective statutes. Project work may include secondary data analysis of occupational health domain in the above-mentioned establishments. Narrative reviews, Systematic reviews, and case reports, etc. will not be considered as Project Work. The Project work shall commence from the first working day of the third month of the programme in all the institutions all over India and duration shall be 10 working days. The project work shall be duly approved by the Course Coordinator/Course Director. There shall not be any violation of ethical principles of biomedical and health research and it is to be ensured by the respective institution. The final project work report shall be within 5000 words and printed hardbound copy with black cover and golden embossing. The project report shall be duly checked, approved, and duly signed by the course coordinator/course director/head of institute. At least two copies of the project report should be prepared out of which one shall be submitted to the Institute during final examination.

The Project Work should consist of following sections:

- I. Title:
Times New Roman, 14 font size, Bold, Line Spacing 1.5, Justify
- II. Structured Abstract (Max 300 Words): Introduction, Methodology, Result and Discussion.
Times New Roman, 12 font size, Line Spacing 1.5, Justify
- III. Keywords (Max 5 Keywords in MeSH Terminology):
Times New Roman, 12 font size, Italic
- IV. Introduction:
Times New Roman, 12 font size, Line Spacing 1.5, Justify, Single Column, A-4, Equations, Tables and Figures (colored) shall be numbered chronologically, starting from Introduction to Conclusion. In text citation as numbers in chronologically in square brackets [] as cross linked to corresponding reference
- V. Review of Literature:
Times New Roman, 12 font size, Line Spacing 1.5, Justify, Single Column, A-4
- VI. Materials and Methods
Times New Roman, 12 font size, Line Spacing 1.5, Justify, Single Column, A-4
- VII. Results and Analysis
Times New Roman, 12 font size, Line Spacing 1.5, Justify, Single Column, A-4
- VIII. Discussion
Times New Roman, 12 font size, Line Spacing 1.5, Justify, Single Column, A-4
- IX. Conclusion
Times New Roman, 12 font size, Line Spacing 1.5, Justify, Single Column, A-4
- X. References:
In Vancouver format with in text citation as square brackets []

Plagiarism Prevention: The project report prior to submission should be checked by the candidate for plagiarism. The similarity content should not exceed 10% & not more than 2% from any single source. In this regard, a self-declaration by the candidate shall be included in the report.

EDUCATIONAL/INDUSTRIAL VISITS & SPECIALTY CLINICAL EXPOSURE: 50 Sessions

I. Educational/Industrial Visits: 30 Sessions

At least 9 field visits must be conducted in registered factories specially in the industries involving hazardous process as mentioned in the First Schedule of the Factories Act, Construction sites, dock works (if nearby), mines (if nearby), Plantation work (if nearby) to study occupational health hazards, control measures and the functioning of occupational health services there. One educational visit may be conducted in any specialized or advanced center for management of occupational health problems or dealing with occupational rehabilitation services or occupational toxicity or occupational research organization.

II. Specialty Clinical Exposure: 20 Sessions

Specialty Clinical exposure in nearby ESI Hospitals/Any Tertiary Care Hospital/Medical Collage in the department of Respiratory Medicine/ENT/Eye/Dermatology/Orthopedics/Physical Medicine and Rehabilitation (PMR)/Community Medicine/Psychiatry or discussion of different topics by the specialists from the above departments to get exposure in recent advancement in the respective discipline with respect to occupational health issues.

N.B: A notebook is to be prepared by every AFIH delegate, containing brief description of educational/industrial visits and specialty clinical exposure and the same is to be submitted at the institute during examination

TUTORIAL/DEMONSTRATION & PRACTICAL TRAINING: 55 Sessions

At the end of the course, the AFIH delegates should acquire the following practical skills:

OCCUPATIONAL AND ENVIRONMENTAL HEALTH: 35 Sessions

- a. Medical examination - proficiency in collection of proper occupational exposure history, general examination, recognition and demonstration of physical finding, pre-employment/pre-placement, periodic, exit medical examination and special examination.
- b. ILO International Classification of Radiographs of Pneumoconioses, CT scan for Occupational Lung Diseases
- c. Lung function tests
- d. Audiometry
- e. Vision testing
- f. E.C.G.
- g. Bio-chemical & pathological investigations, routine & special
- h. Research Methodology, Biostatistics, & Data Analytics
- i. First Aids, BLS & ACLS, Use of AED
- j. Evaluation of physiological work stress
- k. Exercise stress test
- l. Test for Vertigo
- m. Techniques for different anthropometric measurements, biomechanics

INDUSTRIAL SAFETY: 5 Sessions

- a. Practical/Video Demonstration of Machine Safety
- b. Practical/Video Demonstration of Fire Fighting Equipment
- c. Practical/Video Demonstration of Work at Height Safety Equipment
- d. Case discussion Bhopal, Mexico, Flixborough, Seveso, Chernobyl and Feyzin disasters

INDUSTRIAL HYGIENE: 15 Sessions

- a. Assessment of workplace airborne contaminants, Sampling, analytical techniques, and their interpretation.
- b. Monitoring of workplace ventilation, heat, humidity, noise, illumination & color, vibration, radiation
- c. Respiratory and Non-Respiratory Personal Protective Equipment

N.B: A notebook is to be prepared by every AFIH delegate containing brief description of the practical works and the same is to be submitted at the institute during examination

TEACHING - LEARNING METHODS:

Principles

Acquisition of practical competencies being the keystone of any post graduate medical education, AFIH training should be skills oriented. Learning in AFIH programme should be essentially self-directed and primarily emanating from clinical and academic work. The formal sessions are merely meant to supplement this core effort.

Teaching Learning methodology:

Teaching methodology includes:

1. Didactic lectures by the experts
2. Presentations and Group Discussions on topics as per the syllabus
3. Self-Directed Learning
4. Hands on training during tutorials and practical sessions
5. Practical or Video based Demonstration
6. Supervised Project Work
7. Supervised Industrial/Educational Visits
8. Specialty Clinical Exposure/Discussion

ASSESSMENT:

SUMMATIVE ASSESSMENT, i.e.at the end of the AFIH training

The summative examination would be carried out as per the guidelines of DGFASLI, Mumbai

1. Theory Examination:

The examination shall be in MCQ Type: 100 marks*.

Every correct answer will be of 1 mark and every wrong answer will be of minus ¼ marks.

Marks Distribution (Suggestive) in the Final Theory Examination:

Domain	Marks
A) Fundamentals of Industry and Industrial Management	05
B) Occupational & Environmental Health	50
C) Industrial Safety	10
D) Industrial Hygiene	15
E) OSH Statutes and Standards	20
Total	100

*Candidates securing 50 marks shall be declared to have passed in this section (Theory). Decision of the AFIH Academic Council in this regard shall be final.

2. Practical/Oral/Clinical/Project Work examination: 100 marks**

SECTION: i (50 Marks)

- I. Practical/Demonstration: 40 marks
- II. Evaluation of Practical Note Book and Visit Work Book: 10 marks

SECTION: ii (50 Marks)

- I. Oral/Clinical Examination: 40 marks
- II. Evaluation of Project Work: 10 marks

**Candidates securing minimum of 50 marks [25 marks in Section: i and 25 marks in Section: ii separately] shall be declared to have passed in this section (Clinical/Practical and oral examination)

N.B.: To qualify for the award of certificate, a candidate must pass in both the sections as mentioned in 1 (Theory Examination) and 2 (Practical/Oral/Clinical/Project Work examination) separately

The training participants to be assessed by the Course Coordinator/Course Director as per the appraisal form (Annexure I) and copy of the same is to be submitted to the AFIH Academic Council.

RECOMMENDED READING

Books (latest edition)

1. Parkes WR - Occupational lung disorders, Butterworths, London.
2. International Labour Organisation – Encyclopaedia of Occupational Safety and Health, Geneva.
3. National Institute of Occupational Safety and Health – Occupational respiratory diseases, US Dept. of Health and Human Service, Washington D C (Revised), USA.
4. World Health Organisation - Harmful exposure to mineral dusts, World Health Forum, 15(2).
5. Gardner AW - Current approaches to Occupational Health 2, John Wright & Sons Ltd, Bristol, London, Boston.
6. International Labour Organisation - Guidelines for the use of ILO International classification of Radiographs of Pneumoconiosis, Geneva.
7. Hunter's Diseases of Occupations, Hodder and Stoughton, London/Toronto.
8. Occupational Health - Harrington and Gill, Blackwell Scientific Publication, Oxford.
9. Epidemiology of Occupational Health – WHO, European Series No 20.
10. Monitoring for Health Hazards at Work - Gill and Ashton, Grant McIntyre, London.
11. Recent Advances in Occupational Health - MacDonald, Churchill Livingstone, London.
12. Occupational Diseases: A Guide to Their Recognition - National Institute of Occupational Safety and Health, NIOSH, Cincinnati.
13. Occupational Health Practice - Schilling, Butterworths, London.
14. Current Approaches to Occupational Medicine - Ward Gardner, J. Wright, Bristol.
15. Occupational Medicine - Zenz, Yearbook Publication, Chicago.
16. Epidemiology in Medical Practice - Barker and Rose, Churchill Livingstone, Edinburgh.
17. Occupational Epidemiology - Monson, CRC Press, Boca Raton.
18. Early Detection of Occupational Diseases -WHO, Geneva.
19. Epidemiology: Principle and Methods – Mac Mohan and Pugh, Little Brown, Boston.
20. Park's Textbook of Preventive and Social Medicine- Banarsidas Bhanot Publishers
21. Oxford Handbook of Occupational Health, OUP-UK
22. Harrison's Principles of Internal Medicine, Mc Graw Hill
23. Industrial Safety Handbook-Handley- Mc Graw Hill
24. Industrial Hygiene Simplified, Spellman, Bernan Press
25. Patty's Industrial Hygiene, Wiley

Journals and Important Organizations & Repositories:

1. Safety and Health at Work, <https://www.sciencedirect.com/journal/safety-and-health-at-work>
2. Journal of Occupational Health, <https://onlinelibrary.wiley.com/journal/13489585>
3. Occupational and Environmental Medicine, <https://oem.bmj.com/>
4. Occupational Medicine, <https://academic.oup.com/occmed>
5. Indian Journal of Occupational and Environmental Medicine, <https://www.ijoem.com/>
6. International Journal of Occupational Medicine and Environmental Health, <https://link.springer.com/journal/13382/volumes-and-issues>
7. PubMed, <https://pubmed.ncbi.nlm.nih.gov/>
8. International Labour Organization, <https://www.ilo.org>
9. International Training Centre-ILO, <https://www.itcilo.org/>
10. World Health Organization, <https://www.who.int/>
11. Occupational Safety and Health Administration, USA, <https://www.osha.gov/>
12. European Agency for Safety and Health at Work, <https://osha.europa.eu/en>
13. Agency for Toxic Substances and Disease Registry (ATSDR), <https://www.atsdr.cdc.gov/>
14. Centre for Disease Control, USA, <https://www.cdc.gov/>
15. International Agency for Research on Cancer, <https://www.iarc.who.int/>
16. International Commission on Occupational Health, <https://www.icohweb.org/>
17. National Health Mission, <https://nhm.gov.in/>
18. National Digital Library of India, <https://ndl.iitkgp.ac.in/>
19. CSIR-Indian Institute of Toxicology Research, <http://iitrindia.org>
20. Central Pollution Control Board, <https://cpcb.nic.in/>
21. All India Institute of Hygiene and Public Health, MOHFW, GOI, <http://aiihph.gov.in/>
22. ICMR-National Institute of Occupational Health, <https://www.nioh.org/>
23. Online Learning Platform by Government of India, <https://swayam.gov.in/>
24. Directorate General Factory Advice Service and Labour Institutes, <https://dgfasli.gov.in>
25. Ministry of Labour and Employment, GOI, <https://labour.gov.in/>

Annexure I

AFIH DELEGATE APPRAISAL REPORT

Name of the Institute :
 Name of the AFIH delegates :
 Period of Training : FROM.....TO.....

No.	PARTICULARS	Not Satisfactory			Satisfactory			More Than Satisfactory				Remarks
		1	2	3	4	5	6	7	8	9	10	
1.	Presentation/Group Discussion Involvement											
2.	Practical /Laboratory or Skill based learning											
3.	Self-directed learning											
4.	Communication Skill & Inter-Personal Behavior											
5.	Project Work											
Total Score												

Publications

Yes/ No

Remarks*

*REMARKS: Any significant positive or negative attributes of a postgraduate AFIH delegates to be mentioned. For a score less than 4 in any category, remediation must be suggested. Individual feedback to AFIH delegate is strongly recommended.

N.B: If, total score obtained by a AFIH delegate is less than 25, he or she may not be allowed to sit for the final examination. The decision of the competent authority of AFIH Academic Council shall be final in such cases.

SIGNATURE OF COURSE DIRECTOR

SIGNATURE OF COURSE COORDINATOR



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