



## Postgraduate Certificate Course In **OCCUPATIONAL HEALTH**

1<sup>st</sup> April 2019 - 30th June 2019



**Last Date**  
**28th Feb 2019**

**Date of Interview**  
**15th March 2019**

**Associate Fellow of Industrial Health**

**REGIONAL OCCUPATIONAL HEALTH CENTRE (S)**  
**(National Institute of Occupational Health)**  
**Indian Council of Medical Research**  
**Department of Health Research, Govt of India**

**Approved by**  
Directorate General of Factory  
Advice Service and Labour Institutes  
Ministry of Labour  
Government of India

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## ABOUT - ROHCS-NIOH-ICMR

ROHCS- NIOH, Bengaluru under the aegis of Indian Council of Medical Research, New Delhi is conducting its 3rd Batch of three months Postgraduate Certificate Course in Associate Fellow of Industrial Health during 1st April 2019- 30th June 2019. In its 42 years of existence in southern region located at Bangalore, the centre has conducted various training programmes on environmental and occupational health and trained many medical and allied professionals.

The institute has various divisions such as Occupational Medicine, Industrial Hygiene & Toxicology, Air pollution, Biochemistry, Respiratory Physiology, Ergonomics, Statistics, etc. The laboratories are equipped with the modern instruments. The centre's/Institute Scientists are well qualified and have been trained in various disciplines of occupational health. In order to train medical professionals in industrial medicine the course has been planned.



## IMPORTANCE OF THE COURSE & ACCREDITATION

This is the first instance of an industry need course in Occupational Health in Karnataka state supported by **Department of Factories, Boilers, Industrial Safety & Health.**

Associate Fellow of Industrial Health (AFIH) is a three months full time Post Graduate Certificate course in Industrial Health approved by Directorate General Factory Advice Service & Labour Institutes (DGFASLI), Ministry of Labour & Employment, Govt. of India. On completion of course an examination will be conducted by DGFASLI and successful candidates will be awarded **Associate Fellow of Industrial Health (AFIH)** which will fulfill the requirements in terms of additional qualification for Factory Medical Officers of Hazardous Process Industries as required under the Factories (Amendment) Act 1987. The 2 batches of 2016-17, 2018 inducted 50 (25 doctors from each batch) Medical Officers from various industries, academic, state and central governmental institutions.



## ELIGIBILITY CRITERIA

1. MBBS Degree from an Institution recognised by the Medical Council of India.
2. Completion of Internship
3. Permanent Registration with the State Medical Council/ Medical Council of India
4. A minimum of 1 year experience in Industry or relevant field of occupational health or 2 years experience otherwise, after completion of compulsory internship.



AFIH 1st Batch



## DURATION OF THE COURSE & SEATS

**Duration :** 3 Months (1st April 2019 to 30th June 2019). Examination dates will be announced later.

**Number of Seats :** 25 seats only (SC/ST/OBC/PH Reservation as per Government of India rules applicable). Proforma / Undertaking / Declaration formats for claiming the reservation is available in the [www.nioh.org](http://www.nioh.org). The intake of seats may increase depending on DGFASLI decision.



## SELECTION OF SEATS

A merit list will be prepared on the basis of candidate's academic qualification, experience and type of industry employed. The candidates will be selected in the Order of Preference viz., Medical Officers working in the Hazardous Industries / Government, Public Sector Undertakings, Manufacturing Industries (Non-Hazardous) etc. Only short listed candidates will be called for interview.



## COURSE FEE

Rs.45,000/- for industry sponsored candidates and Rs.40,000/- for self financed candidates. DD to be Drawn in favour of **"Officer in Charge, ROHC (S)"** payable at Bengaluru. Payment has to be made on Confirmation of admission letter. List of selected Candidates will also be displayed in our website [www.nioh.org](http://www.nioh.org). An additional Registration Fee of Rs. 6,000/- also to be paid to DGFASLI during the course period.

The candidates sponsored by the Industries, Government, Public Sector Undertakings should enclose the NO OBJECTION CERTIFICATE from the employer and candidate is responsible for collection of fees from their employer. This centre will not do any correspondence regarding fees with their employers.



## HOW TO APPLY

Prospectus and application form may be collected personally at ROHC (S), Bengaluru on payment of Rs.500/- or may be downloaded from website-[www.nioh.org](http://www.nioh.org). If the application form is downloaded from the website, please enclose the cost of application fee (Rs.500/-) as Demand Draft in favour of **"OFFICER IN CHARGE, ROHCS"** payable at Bengaluru. Applicants working in Govt/ Public Sector Undertakings/ Private Industries etc should apply through proper channel.

Applications complete in all respects along with Self attested Xerox copies of certificates should reach the OFFICER IN CHARGE, REGIONAL OCCUPATIONAL HEALTH CENTRE (S), POOJANAHALLI ROAD, KANNAMANGALA POST, DEVANAHALLI TK, BENGALURU 562110. The envelope containing the application should be superscribed **"APPLICATION FOR ADMISSION INTO AFIH 2019"**. A scanned copy of entire application with enclosures shall be sent to [afih.ac@dgfasli.nic.in](mailto:afih.ac@dgfasli.nic.in)

**LAST DATE FOR THE RECEIPT OF FILLED IN APPLICATIONS : 28th Feb 2019, DATE OF INTERVIEW 15th March 2019**



## ACCOMMODATION

Limited sharing guest house facilities available on payment basis for outstation candidates subject to availability.

**Note: The candidates are requested to check at ROHC (S), Bengaluru or [www.nioh.org](http://www.nioh.org) for any updates regarding AFIH 2019 Batch Course selection / exams / results.**





## COURSE CONTENTS & SYLLABUS \*

Theory: Various aspects of Occupational Health and Industrial Medicine Practice.

### A. Occupational Health and related Statutes

**Overview of Occupational Health:** Occupational Health: Introduction, History of Occupational Health, Present status of Occupational Health: Nationally and Internationally including public health & social welfare, strategy and programme of health protection and role of International Organisation, Government, employer, safety committee, trade union and employees, Occupational Health Policy in India including health care delivery system in India, Occupational Health Surveillance, Occupational Health Service at work place, Workplace Health Monitoring, maintenance of health register & records, Prevention of Occupational Health Hazards, occupational health audit and occupational Health Survey. National and International Organisations in the field of occupational health. OHS: its principles & functions, First Aid Centre, First Aid Box and industrial hospitals, Diagnosis of occupational diseases, Occupational health hazards and its preventive measures.

**Physical Health Hazards & its Management:** Physical Health Hazards in Industry including heat, cold, noise, vibration, ionizing radiation, non-ionizing radiation, electricity, light, barometric pressure, electro-magnetic field etc.,

**Chemical Health Hazards & its Management:** Toxicokinetics – absorption, metabolism, retention, entoxification, detoxification, excretion of toxic chemicals (xenobiotics), toxicology related to different systems/organs, acute versus chronic effects, relation between workplace exposure and health effects. Metals in Industry like Arsenic & its compounds, Beryllium & its compounds, Cadmium & its compounds, Chromium & its compounds, Cobalt & its compounds, Copper & its compounds, Fluoride, Lead & its compounds, Manganese, Mercury, Nickel & its compounds, Phosphorus, Uranium. Gas, Vapor & Mist in Industry like Carbon Monoxide, Hydrogen Cyanide, Hydrogen Sulphide, Chlorine, Phosgene, Ammonia, Phosphine, Methyl Isocyanate, Sulphuric Acid, Organic Chemicals like Benzene, Toluene, Carbon Disulphide, Vinyl Chloride, Methylene Chloride (Dichloromethane). Pesticides & its toxicity.

**Occupational Lung Diseases & its Diagnosis:** Occupational Lung Diseases like Silicosis, Asbestosis, Coal Worker's pneumoconiosis, Mixed Dust Fibrosis. Occupational Asthma (i.e., Byssinosis) & Extrinsic Allergic Alveolitis (like Bagassosis). Pulmonary Function Test. ILO Radiograph on Pneumoconiosis. Notifiable Occupational Diseases in India as per Factories Act, 1948, ILO list of Occupational Diseases globally.

**Biological Hazards & its Management:** Occupational Zoonotic Diseases.

**Ergonomics & Work Physiology:** Introduction to Ergonomics, application of ergonomics in industry, Stress and performance, anthropometry and work physiology, physical fitness test in industry, fatigue, VO2Max, workload.

**Psychosocial Hazards:** Psychosocial Hazards in Occupation and application of industrial psychology in occupational health, occupational health disorders of psychological origin, well-being programme, principle of behavioural toxicology. Shift work in industry.

**System-wise injury:** Cumulative Trauma Disorders, Occupational Dermatoses, Occupational Eye Injury, Workplace exposure and its effects in various systems.

**Programme & Services:** Occupational Health Programme: Hearing Conservation Programme, Vision Conservation Programme, Programme on NCD (Non Communicable Diseases), Occupational Health Service, First Aid Service, Ambulance Service etc. Industrial Nutrition & Canteen Services, the Occupational Health Nurse and their role/services in industry.

**Statistics:** Epidemiology – its purpose, planning, determinants of diseases, methods. Different types of epidemiological studies like Case control & Cohort studies etc. Incidence rates, prevalence rates, mortality rates, morbidity rates, t-testing, significance testing, Chi-2-testing, correlation, research methodology and planning for research in occupational health.

**Miscellaneous:** Major Accident Hazard Control in Industry & its Medical Response, Women at work, Occupational Carcinoma, Welding Hazards & its Management, Recent advance in occupational medicine and impact of nano-technology, modern concept of Occupational Health Service, Human Resource Development concept on occupational health in industry.

### B. Occupational Safety and Health Legislations

ILO Conventions, The Workmen's Compensation Act, OHSAS18001, ESIC Act, The Bio-Medical Waste Rules, Mines Act.1952 & Mines Rules, 1955, The Factories Act, 1948 and State Model, MSIHC Rules 1989, Water (Prevention & Control of pollution) Act, 1974 and Rules, Air (Prevention & control of pollution) Act, 1981 and Rules, Environment protection Act 1986 (Amended) and Rules, The Dock Workers (Safety, Health & Welfare) Act, 1986 and the Regulations 1990 framed there under.

**C. Industrial Safety:** Principles of Accident Prevention: Definitions-Incident, Accident, Injury, safety, Hazard, Risk, Unsafe Acts and Unsafe Conditions etc. Accident Prevention, Theories/Models of Accident Occurrences, Principles of Accident Preventions. Accident and Incident Investigation: Need to investigate incidents, who, what and how to investigate incidents, various Analytical Techniques to investigate incidents, preparing the incident report and corrective action. Hazard Identification, Prevention and Control: Techniques of Hazard identifications, prevention strategies and control measures through hierarchy of control. Behavior Based Safety: Need for Behavior Based Safety, Understanding Human Behavior SOBA and ABC Model, Values and Attitude, Behavior Characteristics, Feed back. Mechanical and Electrical Safety, work permit, SOPs etc.

**D. Industrial Hygiene:** Industrial Hygiene Principles and practice, Work environment monitoring and its importance, Industrial Noise and its effects, Heat stress and its effects, Industrial Ventilation, Concept of Threshold Limit values/Permissible Exposure Limits/Recommended Exposure limits in industry. Types of radiation and Radiation Hazards, Illumination, Material Safety Data Sheets (MSDS), Biological monitoring & its analytical technique, Chemical Hazards in the work place, Selection, use and maintenance of Respiratory & Non-respiratory Personal Protective Equipment, Exposure Assessment studies in Industry.

### E. Staff Training & Productivity

Elements of Training – process, assessment of training needs, design and development of training program, training methods and strategies, evaluation of training. communication – purpose, process, types of channels, two-way communication, barriers in communication and essentials of effective communication. productivity-concepts and techniques, Team Building-Concepts & practices, how to make a team effective.

*Practical and Clinical Training, Educational Visits, Group Discussions, Project Work etc., Project work at work place will required to be carried out. Industrial visits will be made to Pharmaceutical, Cement Manufacturing, Chemical, Automobiles, Foundries, Garment and other important industries.*



AFIH 2nd Batch

<b>Application for Admission</b> <b>Associate Fellow of Industrial Health (AFIH) - 2019</b> Regional Occupational Health Centre (S), (National Institute of Occupational Health), Kannamangala Post, Bengaluru-562110 <i>(All information should be written in CAPITAL LETTERS only)</i> <i>(Strike off the option not applicable)</i>					Affix a recent passport sized 2 x 2 inches photograph with white background only		
1.	Name (As written in the Medical Council Registration Certificate)						
2.	Gender (Male / Female)						
3.	Date of Birth (dd/mm/yyyy)						
4.	Designation						
5.	Employer's Full Address with pin code (If employed)						
	Pin code :						
6.	Address for correspondence						
	Pin code :						
	Contact No. / Email ID						
7.	Qualification (MBBS, P.G.Degree/Diploma etc.)						
	<b>Examination Passed</b>	<b>Name of the Institution</b>	<b>Year of passing &amp; Date of completion of Internship</b>		<b>% of Marks</b>	<b>MCI/State Medical Council Reg. No.</b>	
	MBBS						
	MS						
	MD						
	Others						
8a	Do you belong to SC/ST/OBC/PH ?				Yes	No	
	(If yes, please specify the category & attach attested copy of the certificate)						
8b	for OBC candidates whether Declaration / undertaking is enclosed				Yes	No	
9	If employed, whether "No Objection Certificate" enclosed				Yes	No	
	Name & Address of Employer	Post Held	Period & duration of Experience		Total Experience after Completion of Internship		
					Years	Months	
10	If employed, whether "Sponsorship Certificate" enclosed				Yes	No	
11	Experience (attach certificate(s) from the employer)				Yes	No	
I hereby solemnly certify that the information given above is true and correct.							
Date :					Applicant's Signature		
Place:							

**List of Enclosures (Please do not enclose original certificates)**

- Self Attested photocopies of (a) MBBS Degree (Convocation Certificate), (b) Internship Certificate Issued by the Medical College (Not University) (c) MCI / State Medical Council Registration Certificate (d) SC/ST/OPC/PH Certificate Issued by the competent authority, if applicable. (e) Experience Certificate.
- Sponsorship Certificate / No objection Certificate in Original, if employed.
- If there is a change in name, copy of Gazette and Medical Council Registration with the changed name should be provided.

