

**GUIDELINES FOR THE POST-GRADUATE CERTIFICATE COURSE IN
INDUSTRIAL HEALTH OF 3 MONTHS DURATION –**

ASSOCIATE FELLOW OF INDUSTRIAL HEALTH (A.F.I.H.)

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**DIRECTORATE GENERAL FACTORY ADVICE SERVICE &
LABOUR INSTITUTES
GOVERNMENT OF INDIA, MINISTRY OF LABOUR & EMPLOYMENT
CENTRAL LABOUR INSTITUTE BUILDING, SION
MUMBAI 400 022**

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1. ORGANISATIONAL SET-UP FOR CONDUCTING 3 MONTHS POST-GRADUATE CERTIFICATE COURSE IN INDUSTRIAL HEALTH (AFIH)

The course shall be controlled by the Directorate General Factory Advice Service & Labour Institutes, Government of India, Ministry of Labour, at the All India level and shall be assisted by the Advisory Bodies to be known as '*Academic Council*' and '*Examination Board*'.

ACADEMIC COUNCIL

1.1.1. COMPOSITION

The following 15 members will constitute the Academic Council:-

1. Director General
Factory Advice Service & Labour Institutes,
Govt. of India, Ministry of Labour, Mumbai - President
2. Dy. Director General
(to be nominated by Director General, DGFASLI) - Chairman
DGFASLI, Mumbai
3. Director (IM)/Deputy Director (IM) - Course In-charge &
DGFASLI, Mumbai Member Secretary
4. Director General
Directorate General of Health Services
Govt. of India, Ministry of Health &
Family Welfare, New Delhi - Member
5. Director In-charge
Industrial Hygiene Division
Central Labour Institute, Mumbai - Member
6. Director
National Institute of Occupational Health
I.C.M.R., Ahmedabad - Member

7. Director
I.T.R.C., Lucknow - Member
8. Director of Industrial Safety & Health
Govt. of Maharashtra, Mumbai - Member
9. C.I.F./Director of Industrial Safety & Health
from 1 State/U.T. as nominated by the
President of the Council - Member
10. Representative of Confederation of Indian
Industry - Member
11. Professor/Associate Professor/Reader of
P.S.M./Community Medicine/Chest
Diseases from a medical college as
Nominated by the President - Member
12. Dean (faculty of medicine)
University of Mumbai - Member
13. Head of a specialized institution related to
Industrial Health such as Burn/Rehabilitation
Centre etc. as nominated by the President - Member
14. Clinical expert practicing Occupational
Medicine/Chest Medicine/Skin as nominated
By the President - Member
15. Practising Industrial health Expert with
AFIH/DIH qualification as nominated by
the President - Member

1.1.2. FUNCTIONS

The council will function as an advisory body to the Director General. Nominated members shall have a term of 5 years. The council will have following functions:-

- The review and revise the syllabus, if necessary, from time to time and suggest changes in the curriculum of the course.
- To recommend the recognition of institutions/organizations desirous of running the course, after receiving the report of the respective CIF/Director of Industrial Safety and Medicine or/and DGFASLI.
- To consider withdrawal/suspension of recognition in respect of institutions.
- To consider withdrawal of qualification/registration of the individual.
- Any other matter brought before the academic council for their advice by the President/Director General related to syllabus, recognition, withdrawal of recognition/qualification or any other technical matter.

1.1.3. MEETING

Academic Council shall meet ordinarily once in every 3 years on the date and venue as decided by the President. However, special meeting may be called by the president to discuss special agenda.

All the expenses including TA/DA etc. incurred by the members for attending the meeting are to be borne by the members themselves/their departments as the case may be. DGFASLI will not be reimbursing any part of these expenses in respect of the members.

1.2. EXAMINATION BOARD

1.2.1. The following 5 members will constitute the Examination Board –

1. Director In-charge (Medical)
Central Labour Institute, Mumbai - Chairman
2. Director / Dy. Director (Medical)
Secretary of the Academic Council - Secretary

3. Medical Inspector of Factories
Govt. of Maharashtra, Mumbai - Member
4. Professor/Associate Professor/Reader
of PSM/Community Medicine/Chest
diseases from a Medical College - Member
(for 2 yrs. term)
5. Clinical expert practicing Occupational
Medicine/Chest Medicine/Skin from
an Industry/Occu. Health Centre - Member
(for 2 yrs. term)

1.2.2. FUNCTIONS

The Board shall be responsible for the conduct of evaluation/examination. The main functions of the Board shall include arranging question papers, appointment of question paper setters, printing of question papers and sending them to the centers so that it reaches on time, to appoint examiners for theory, practicals, project work & oral/clinical etc. and to receive the examiners report etc., get them tabulated by tabulator if needed and get back the details of marks and result. The Board will also be responsible for declaration of result and distribution of certificates to the successful candidates. Besides these, any and all work related to examination will also fall within the responsibilities of the Board.

1.2.3. MEETING

The Examination Board shall meet once in a year to decide the details of the examination and other business pertaining to its functions.

1.3. SECRETARIAT

Secretariat of the Academic Council and Examination Board will be at Industrial Medicine Division of the Central Labour Institute at Sion, Mumbai and will be managed by the Secretary. Administrative support shall be provided by the Central Labour Institute, Mumbai.

1.4. APPROVAL OF STATE/U.T. GOVERNMENTS

Respective State/U.T's Govt. will accord recognition to the institutes for conducting AFIH course as per the guidelines framed by DGFASLI and as recommended by the academic council of AFIH course. Institutes of DGFASLI shall be considered recognized by all the States / U.Ts Govts. for this purpose.

1.5. INSTITUTION LEVEL RESPONSIBILITIES

Every institution conducting the course shall nominate a Director, who shall be responsible for all the matters related to the course at the institute level. He shall be the only competent person to have any correspondence with the State Govt., Central Govt., DGFASLI, Academic Council and/or Examination Board.

2. REQUIREMENTS FOR RECOGNITION OF THE INSTITUTIONS TO CONDUCT THIS COURSE AND PREPARE THE CANDIDATES FOR EXAMINATION TO BE CONDUCTED BY EXAMINATION BOARD OF THE COURSE, DGFASLI., GOVT. OF INDIA, MINISTRY OF LABOUR.

2.1. PREMISES

Institutions/Organisations seeking such recognition must have premises of their own with all the facilities for imparting necessary training such as class rooms fully furnished, audio-visual aids, etc. Sufficient space for imparting practical trainings as per the curriculum.

2.2. REGISTRATION

Institutions/organisations seeking such recognition must be a registered body under the relevant law.

2.3. EQUIPMENTS FOR PRACTICAL TRAINING

Institutions/organizations must have the facilities either of their own/or arranged for imparting practical trainings on orthorators, audiometry, lung function tests, ILO Radiographs, ECG., personal environmental sampling, dust counting, measurement of noise and illumination, assessment of heat stress and laboratories of pathological and bio-chemical analysis of blood, urine, stool etc.

2.4. FACULTIES

Institutions/organizations must have faculties to impart the teaching of special topics competently. Normally, a faculty should be an MBBS with Post-graduate qualification in the respective branch of the medical science having sufficient experience in occupational health.

Or

A medical officer with minimum 10 years experience in the practice of occupational health after MBBS qualification in a large industry.

Or

A Teacher/Faculty in a medical institution imparting such training.

Or

An officer of the Industrial Medicine Division of DGFASLI.

Or

A Medical Inspector of Factories. Faculties for non-medical topics should be the holder of Masters Degree in the respective field with minimum 2 years of experience in the field, or a Bachelors Degree in Engineering with minimum experience of 2 years in the respective area.

2.5. FACULTIES FOR CLINICAL & SPECIALISED TRAINING

Institutions/organizations must have arrangements with ;the hospitals and large occupational health centers dealing with industrial workers/medical college hospitals/district hospitals etc. for imparting the clinical training to the candidates in the area of occupational health disorders/occupational diseases.

2.6. VISITS

Institutions/organizations must have arrangements for minimum 3 factory visits and minimum 2 institutions of specialized nature dealing with occupational health.

2.7. LIBRARY

Institutions/organizations must have a reasonably good library with books and journals in the area of occupational health.

3. **PROCEDURE OF RECOGNITION**

3.1. APPLICATION

Application for recognition should be made to the Academic Council of AFIH enclosing the documentary evidence of fulfilling all the requirements. On receipt of applications, the committee constituted by Chairman/Director General, Academic Council of AFIH, may inspect the institution.

3.2. INSPECTION BEFORE RECOGNITION

Committee constituted by Chairman/Director General, Academic Council of AFIH may inspect the institutions to satisfy regarding the availability of facilities as per the norms before recommending the application to the Chairman/Director General. All the expenses of such inspection including TA/DA etc. of the inspecting team will be borne by DGFASLI.

3.3. Recognition shall be granted for period varying between 2 to 5 years. After evaluating the performance by the expert body of the academic council, the recognition period may be extended further or withdrawn as the case may be.

3.4. NUMBER OF COURSES AND PARTICIPANTS

Institutions recognized to run the course will be intimated regarding the number of courses to be conducted by them in a year along with the period and number of candidates to be admitted by them in each course. Recognition granted to an institution for conducting this course may be suspended or withdrawn by the Chairman/Director General, on the recommendation of the AFIH Academic Council.

4. COURSE DETAILS

4.1. NAME

The course will be called “*POST GRADUATE CERTIFICATE COURSE IN INDUSTRIAL HEALTH – ASSOCIATE FELLOW OF INDUSTRIAL HEALTH*”. In short, it may be written as A.F.I.H.

4.2. DURATION

The course shall be a full time regular course and shall be of three months duration.

4.3. OBJECTIVE

The objectives of the course is 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 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 occupational health programmes for the health protection of industrial workers, improving national productivity and national prosperity.

4.4. ELIGIBILITY FOR ADMISSION

4.4.1. Candidates seeking admission must possess MBBS qualification with full registration of Medical Council of India.

4.4.2. Minimum of 1 year experience in industry or relevant field of occupational health or 2 years experience otherwise, after completion of compulsory internship.

4.5. SYLLABUS

4.5.1. THEORY

Introduction to occupational health, history and development of occupational health, status of occupational health globally and in India, Public Health and Social Welfare, Strategy for health protection of workers in India, role of Governments, Employers, Trade Unions and Employees in health protection of workers, General health policy of India including administration of health care delivery system in India, Safety movement and role of occupational health in total safety of industrial workers.

General sanitation, purification of water, drinking water supply, waste disposal in general.

Principles and relevance of toxicology, toxicology related to different system/organs, epidemiology – purpose, planning, determinants of diseases, methods, descriptive studies, analytical studies, case control and cohort studies, experimental studies, incidence rate, prevalence rate, mortality rate, morbidity rate, sampling, sample size, sampling methods, data analysis, standardization, preparation of reports, validity testing – standard deviation, t-tests, significance testing, Chi² testing, correlation, research methodology and planning for research in occupational health.

Occupational health disorders and occupational diseases – mode of causation, acute versus chronic, relationship between health and work, history and trend of occupational diseases, status of occupational diseases in India, occupational notifiable diseases as per the Factories Act, ESI Act, Mines Act and Port & Dock Workers health, safety &

welfare regulation, occupational diseases listed in Workmen Compensation Act and Rules. Details of all such diseases including causation metabolism, pathogenesis, clinical features, investigations, differential diagnosis, diagnosis management, first-aid, prevention and control of such diseases. Occupational health disorders in hazardous processes.

Occupational lung diseases – occupational asthma, extrinsic allergic alveolitis and other special diseases such as silicosis, asbestosis, byssinosis and coal miners pneumoconiosis. Occupational skin diseases,

occupational eye injuries, diseases due to physical environment – extremes of temperature, pressure, heat, noise, vibration and radiation.

Introduction & basics of ergonomics, back-ache, repetitive strain injuries, cumulative trauma disorders, stress performance, application of ergonomics in occupational health, anthropometry, principles of work station designing.

Diagnosis of occupational diseases – special investigations, biological monitoring, tests for mutagenicity, carcinogenicity, principles of behavioural toxicology.

Industrial Hygiene – Introduction to industrial hygiene, concept of TLV, airborne contaminants, organizing industrial hygiene service and industrial ventilation.

Industrial Safety – Accident prevention, safety committee, personal protective equipments, industrial illumination & colour, accident investigation & reporting.

Industrial Psychology – Introduction to industrial psychology, occupational stress & its management, shift work, occupational health disorders of psychological origin, well being programme.

Work Physiology, heat stress; techniques of training, identification of training needs, designing & conducting training programmes, communication & barriers of communication, effective communication; occupational health in relation to productivity – concept of productivity, inventory control & techniques, principles of kaizen.

History of legislation related to occupational health & safety, of industrial workers globally and in India, Factories Act & process of making of rules, health provisions under the Indian Factories Act, ESI Act, Workmen Compensation Act and relevant legislation. Workmen Compensation Act & evaluation of industrial injuries.

Occupational Health Service at work place – organization, function & management, prevention & control of occupational diseases – medical surveillance, pre-employment medical examination, pre-placement medical examination, periodic medical examination, pre-retirement medical examination, special medical examination, maintenance of health registers

and records. Occupational health programmes – hearing conservation, vision conservation programme, industrial nutrition, first-aid service, ambulance service, medical emergency response planning for MAHC & use of computers in occupational health.

Recent advances in occupational medicine & relation/impact of diabetes, T.B., I.H.D., HIV. Women at work, national & international organizations in the field of occupational health, occupational health management, industrial nutrition, canteens.

4.5.2. PRACTICALS

Lung function tests, Audiometry, Vision testing (Orthorator), E.C.G., Bio-chemical & pathological investigations, routine & special, I.L.O. radiographs, dust counting, use of personal sampler & measurement of noise, heat illumination and ventilation, anthropometry.

4.5.3. CLINICAL TRAINING IN HOSPITALS/PUBLIC HEALTH DEPARTMENTS / OCCUPATIONAL HEALTH CENTRES IN INDUSTRY:

Clinical teaching in hospitals dealing with industrial workers, preventive and social medicine, public health/community medicine.

4.5.4. EDUCATIONAL VISITS

At least 9 field visits must be conducted to study the functioning of occupational health services, specialized advanced management of diseases & centers for management of occupational health problems.

4.5.5. TUTORIALS / PAPER PRESENTATION

Every candidate must present health & safety related paper on the allotted topic. His/her presentation should be discussed in detail in the class.

4.5.6. PROJECT WORK

Every candidate shall submit a project work (thesis) on the topics allotted to them as per the guidelines.

4.5.7. GROUP DISCUSSION/WORKSHOP/SEMINAR

4.6. EXAMINATION

On completion of 3 months curriculum, examination shall be conducted and successful candidates will be awarded the certificates to that effect.

4.6.1. ELIGIBILITY TO APPEAR IN THE EXAMINATION

4.6.1.1. Candidates must have attended the classes regularly and have 75% attendance. A certificate in this respect must be issued by the Director of the course & accompany the application.

(N.B.): Any shortfall in attendance – not less than 60% in any case – may be considered for condonation provided the shortfall is due to self serious sickness & supported by the medical certificate from a competent medical practitioner. However, this genuine circumstances, & every such case shall be treated separately and not as a rule.

4.6.1.2. Candidates must have submitted the project work, tutorial/presentation of paper, practical note book and field visit books.

4.6.2. APPLICATION FOR APPEARING IN EXAMINATION

- 4.6.2.1. Candidates attending regular course should forward their application through the Director of the institute along with the necessary enclosures to the Secretary, Examination Board so that it reaches him before the stipulated period.
- 4.6.2.2. Candidates who failed in the earlier examination / could not appear but were declared eligible to appear, should submit their application for re-appearing in the examination. Examination forms and other details can be obtained from the respective institutes.

4.6.3. ADMIT CARD

Candidates found eligible to appear in the examination shall be issued with an admit card which they must produce to the authorities on demand before entering the examination hall.

4.6.4. EXAMINATION PROCEDURE

4.6.4.1. Theory

Either of the two formats may be used for this purpose.

- (i) A multiple-choice questionnaire containing 100 questions with multiple answers shall be given to the examinees to pick up the correct answer. Every correct answer will be of 1 mark and every wrong answer will be of minus $\frac{1}{4}$ marks. Candidates securing 50 marks shall be declared to have passed in this section. Time allowed for this shall be 2 hours.

(ii) Multiple choice questionnaire containing 50 questions with multiple answers will be given to the candidates to pick the correct answer. Each character reply will be of 1 mark and every wrong answer will be of minus ¼ mark. Along with this 3 long questions will also be given as follows:-

- Four short notes of 20 marks (5 marks each).
- Two descriptive type of long questions 30 marks (15 marks each)

A candidate securing 50 marks shall be declared to have passed in this section. Time allowed for this shall be 2 ½ hours.

4.6.4.2. Practicals / Oral / Clinical / Project Work

Practical / Oral / Clinical / Project Work examinations shall be of 100 marks which is divided as –

(i) Practical	-	40 marks	} 50 marks
Practical note book, Visits work book	-	10 marks	
(ii) Oral/Clinical	-	40 marks	} 50 marks
Project work	-	10 marks	

Candidates securing minimum of 50 marks [25 marks in (i) and 25 marks in (ii) separately] shall be declared to have passed in this section.

4.6.4.3. To qualify for the award of certificate, a candidate must pass in both the sections as mentioned in 4.6.5.1. & 4.6.5.2. separately. Those securing 75% and above as total will be declared to have passed with distinction.

4.6.4.4. Candidates who have failed and wish to appear again in the examination shall have to appear in both i.e. theory and practical, oral, clinical, project work etc. sections irrespective of their

performance in various sections in the last examination in which they appeared.

A candidate re-appearing after two years (either failed twice or could not appear for two years due to any other reason shall have to submit a fresh project work (thesis) on a topic allotted to them by the institute.

4.6.4.5. Question paper setter

Examination Board shall appoint three paper setters requesting them to send three sets of question papers. Out of the sets of question papers received, a blind draw will be made to select the final question for the examination. However, in case only one question paper is received, the same shall be used for the examination. The finally selected question paper will be subjected to inspection and if needed moderation.

4.6.4.6. Examiners

Examination shall be taken by duly appointed examiners by the Examination Board. The number of such examiners should be minimum four, one each for theory, practical, oral/clinical and project work + field visit work book. Out of the four, minimum one and maximum two examiners may be from the institute concerned and remaining from outside. However, Examination Board may decide to appoint all the examiners from outside, if they desire so.

Examiners shall submit the details of marks obtained by the candidates and examiners report to the Secretary of the Examination Board within 15 days of the examination. After receipt of the marks from examiners, Secretary will send it to tabulator for preparation of detailed tabulation sheet and result which tabulator will submit back to the Secretary.

4.6.5. RESULT

On receipt of the final result sheet from the tabulator, Secretary, Examination Board shall process the matter for perusal and approval of the Director General, Factory Advice Service & Labour Institutes, Ministry of Labour, Government of India.

In special circumstances, Director General may grant up to 3 marks as grace to candidate/candidates if he feels necessary.

On receipt of the approval, Secretary will declare the result.

4.6.6. CERTIFICATES

Certificates shall be awarded by the DGFASLI, Ministry of Labour, Government of India and the same will qualify to fulfill the requirements as stipulated in this regard in the Factories Act and rules frame there under in the country.

4.6.7. REGISTRATION

DGFASLI, Ministry of Labour, Government of India shall maintain a register of successful candidates, who passed the examination of AFIH. The register shall have the entries in respect of name, address, father's/husband's name, appointment if any. The serial number of entries in respect of the particular candidate in this register shall be deemed as his/ her registration number. Every successful candidate shall be provided with a copy of such entries called as 'certificate of registration'.

No individual shall be entitled to any special consideration on the basis of certificate of passing the examination of AFIH certificate unless he or she is registered with the DGFASLI and the details are entered in the aforesaid register.

4.6.8. WITHDRAWAL OF REGISTRATION

The registration accorded to any individual may be temporarily suspended or permanently withdrawn by the Director General, Factory Advice Service & Labour Institutes, Ministry of Labour, Government of India on the recommendation of the academic council, if a duly appointed committee by either him or academic council finds the individual not worthy of retaining the same and by the action has brought about the disrepute to the profession or the institute.

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