



## Program Specification for Doctorate Degree Of Industrial Health Management in Occupational and Environmental Medicine

**Program type:** Single

**Program code:** OEM921

**Department offering the program:** Occupational and Environmental Medicine Department

**Total credit points:** 100

**Academic year:** 2016/2017

**Program Coordinator:** Prof. Inas Mohamed Fawzy Gaballah  
**Assistant Coordinator** Assist. Prof. Dr. Aisha Mohamed Samir  
Lecturer. Dr. Rateba Said

**External Evaluator:** Professor Dr. Ahmed Alsaïd Asmat Shouman,  
Professor of Occupational Health Department, Faculty of Medicine, Ain  
Shams University, Egypt.

### I. Aim of Program

The program aims at ensuring the acquisition of knowledge, skills and positive attitudes related to its applications in the field of Industrial health, with the development of an appropriate background covering the emergency situations of environmental disasters and their management and provide an introduction to the principles and practice of Industrial hygiene, which is concerned with the *Anticipation, Recognition, Evaluation and Control* of work place hazards to health and safety. These functions all require a sound understanding of industrial toxicology, industrial processes, methods of exposure assessment, behavior of chemical and physical agents in the environment, and the application of guidelines and standards. It also ensures the gaining of professional skills needed for research development in occupational and industrial health to help in the implementation of suitable control and risk management programs in the community.

### II. Intended learning outcomes of program (ILOs)

- A. **Knowledge and Understanding:** By the end of the program, the candidate should be able to:
1. Describe the theories and fundamentals related to the field of industrial health and the related areas.
  2. Describe the nature of the health effects associated with exposure to industrial agents.

3. Recognize the standard methods for measuring and evaluating worker exposure to chemical and physical agents.
4. Apply and interpret health and safety standards and regulations for the work place environment.
5. Explain the performance characteristics and limitations of selected personal protective equipment.
6. Identify the reciprocal influence between professional practices and their impacts on the environment.
7. Discuss the scientific developments in the field of occupational and Industrial health.
8. Define the moral and legal principles of professional practices in the area of occupational and Industrial health.
9. Demonstrate the basics and principles of quality in the professional practices in the field occupational and Industrial health.

**B. Intellectual Skills**

By the end of the Doctorate's program, the graduate in the field of occupational and Industrial health will gain intellectual skills to be able to:

1. Identify and manage the occupational health disorders encountered in various industries and to manage the industrial injuries caused by chemical, physical and biological exposures, in general and in hazardous process industry in particular.
2. Analyze and evaluate information in the field of occupational and Industrial health to be used for solving problems.
3. Solve specialized problems in the field of occupational and Industrial health in the absence of some data.
4. Adapt the general approach to controlling worker exposure to health and safety hazards to a specific industrial setting.
5. Integrate the different facts for solving professional problems.
6. Formulate research studies and/or writing scientific methodology on a research problem.
7. Assess the risk in professional practices in the area of occupational and Industrial health.
8. Design plan for the development of performance in the field of occupational and Industrial health.
9. Provide professional decisions in various professional contexts.

**C. Professional Skills: By the end of the program, candidate should be able to:**

1. Perform the basic current and recent professional skills in the field of industrial health and apply preventive and control measures of occupational health problems.
2. Construct occupational and environmental health and safety professional reports
3. Evaluate the existing methods and tools in the area of occupational and

Industrial health and safety.

**D. General and Transferable Skills: By the end of the program, the candidate should be able to:**

1. Interact effectively in all different ways with workers for the increase in awareness and the provision of health education.
2. Advise, supervise and participate in the national occupational health programmes for the health protection of industrial workers, improving national productivity and national prosperity.
3. Use the information technology to remain updated with the advances in knowledge so as to serve the professional practices.
3. Assess one's self to identify the personal learning needs.
4. Manage time and different resources effectively to obtain the knowledge and information.
5. Develop rules and indicators to monitor and evaluate performance of others at work in the field of occupational and environmental medicine.
6. Work in a team and group leading in the occupational field visits and Industrial projects.
7. Manage time with efficiency.
8. Adopt the self and the continuous learning approaches.

### **III. Academic Standards**

1. accredited by the departmental council
2. **External References for Standards:**
  - Department of Environmental and Occupational Medicine, Oxford University, UK
  - Department of Environmental and Occupational Medicine, Ohio University, USA

### **IV. Program Admission Requirements**

Potential students should hold an honor Master degree in Occupational and Environmental Medicine from an approved institution. Students are advised to have overview of advanced medical statistics with some research experience. They are also advised to have ready access to a personal computer with the following minimum specifications: Windows 2000/XP/Vista/W7; Soundcard/speakers and headphones and 24 x CD ROM drive; A 56 kbs or greater internet connection with Explorer or Netscape; A Quick-Time Player or Windows Media Player to run interactive exercises.

## V. Program Structure and Contents

**Program duration:** Three academic years.

**Program structure:** Total Credit points 100

- Compulsory courses Industrial health management **20 credit points**
  - a. Industrial hygiene **12 credit points**
  - b. Basic Industrial toxicology and industrial processes **6 credit points**
  - c. Occupational Diseases **2 credit points**
- Elective courses **5 credit points**
- Scientific activities **3 credit points**
- Clinical/Practical training program **32 credit points**
- Doctorate Thesis **40 credit points**

Courses		Credit Points		ILOs
		CPs	Total	
Code	Title			
<b>COMPULSORY COURSES</b>				
<i>IHM.921.IH</i>	Industrial hygiene	12	20	
<i>IHM.921.BITP</i>	Basic Industrial toxicology and processes	6		
<i>IHM.921.OD</i>	Occupational Diseases	2		
<b>ELECTIVE COURSES (MEDC) choose 1 course</b>				
<i>IHM.921.FR</i>	Fitness and Rehabilitation	5	5	
<i>IHM.921.EK</i>	ergonomics and kinesiology	5		
<i>IHM.921.LHS</i>	legislations related to industrial health & safety	5		
<i>IHM.921.AITP</i>	Advanced Industrial toxicology and processes	5		
<b>SCIENTIFIC ACTIVITIES</b>				
Sc.Act.	Scientific activities	3	3	
<b>TRAINING PROGRAM</b>				
<i>IHM.921 C/P</i>	Clinical/Practical training program	32	32	
<b>DOCTORATE THESIS</b>				
<i>IHM.921</i>	Doctorate Thesis	40	40	

## **PRACTICAL TRAINING PROGRAM**

All candidates should complete the specialized clinical training related to the area of Occupational and Environmental Medicine Department for duration of two academic years to acquire the needed credit points. During this period the candidates should attend clinical rounds and share in the scientific activities to acquire skills in the diagnosis and proper management of acutely and chronically occupationally affected adults patients. Also the candidate should attend fixed number of field visits to different industrial sectors. Additionally, the candidates will acquire the knowledge and skills related to the proper interpretation of medical interventions essential for the correct evaluation of occupationally exposed persons.

*NB: The details of the training program are provided in separate documen*

## **DOCTORATE THESIS**

All doctorate degree candidates should prepare a thesis in the area of Industrial health after obtaining the approval of the department and the ethical committees on the protocol of the research. The doctorate degree thesis is a specialized research in the field of Industrial health that includes a review part and a research part. The thesis is supervised by one or more of the senior staff members from the Occupational and Environmental Medicine Department and may include staff members from other specialties according to the necessities of research. The research is then evaluated and approved by a committee of three professors comprising one of the supervising staff members together with an internal evaluator from the same department and an external evaluator from a scientific institution other than the faculty of medicine, Cairo University.

## **SCIENTIFIC ACTIVITIES**

The students should participate in the scientific activities of the departments such as:

- *Journal club.*
- *Seminars (including recent topics and controversial issues). Students are expected to participate in the discussions.*
- *Scientific meetings arranged by the department.*

Each activity is monitored and given credit points registered in a special section in the residency-training logbook. The student should collect all required points before he is allowed to sit for the final exam.

## **VI. Regulations for Progression and Completion**

After collecting the required credit points for courses, clinical training, and scientific activities, the candidate will be eligible to sit for the final examination. In case the student fails to pass the examination, he may proceed in the Doctorate thesis and can resubmit for the next examination. After passing the final examination, he/she should finish the thesis so as to receive the degree. Doctorate degree must be obtained within a maximum of 10 years following registration date.

## **VII. Assessment**

### **A: Assessment Tools**

- **Supervision and Monitoring of Training Program**

According to the Faculty of Medicine, Cairo University Bylaws for Practical Training Programs, the staff members carry out continuous assessment during the program. A practical training program logbook will be kept for each candidate to document all the practical activities in addition to the participation in different scientific activities. The head of department provides permission for the candidates to attend the final examination upon completion of the training program and gathering of credit points needed.

- **Formal Assessment**

According to the Faculty of Medicine, Cairo University Bylaws for Post Graduate Programs (July 2009), students should be assessed at the end of the Doctorate degree.

- Industrial hygiene: A three-hour written exam includes long and short essay questions and multiple choice and problem solving questions as well as an oral exam.
- Basic Industrial Toxicology and Processes: A three-hour written exam includes long and short essay questions and multiple choice questions together with a clinical exam and an oral exam.
- Occupational Diseases : A three-hour written exam includes long and short essay questions and multiple choice questions together with a clinical exam and an oral exam.
- Elective Course: A three-hour separate written exam includes long and short essay questions and problem solving questions as well as an oral exam.

## B: Assessment Schedule:

### Doctorate Final Exam:

*The written exam will be held in April/October (four days):*

*Day one: Industrial hygiene (3 hours)*

*Day two: Basic Industrial Toxicology and industrial processes (3 hours)*

*Day three: Occupational Diseases (3 hours)*

*Day four: Elective course (3 hours)*

*This will be followed by the clinical and oral exams in separate days*

## C: Weighing Of Assessment (Marks allocated to courses):

(50 marks for each credit point)

Courses		Marks			
Code	Title	Written	Oral	Clinical	Total
<b>DOCTORATE DEGREE</b>					
<i>IHM.921.IH</i>	Industrial hygiene	350	250		1000
<i>IHM.921.BITP</i>	Basic Industrial Toxicology and processes	150	100	50	
<i>IHM.921.OD</i>	Occupational Diseases	70	15	15	
<i>IHM.921.AITP</i>	Advanced Industrial Toxicology and processes	175	75	---	250
<i>IHM.921.FR</i>	Fitness and Rehabilitation				
<i>IHM.921.IH</i>	Ergonomics and kinesiology				
<i>IHM.921.IH</i>	Legislations related to industrial health & safety				
<b>Total First Part</b>					<b>1250</b>

### Remarks

- It is mandatory to pass all the papers of written exams separately.
- The passing mark in any written exam is  $\geq 60\%$ .

## VIII. Evaluation of Program Intended Learning Outcomes

<b>Evaluator</b>	<b>Tool</b>	<b>Sample</b>
1. Senior Students	Questionnaire at the end of the program	All the PG students
2. Alumni	The faculty is currently developing an Alumni office for postgraduates	Not yet determined
3. Stakeholders	A meeting will be arranged during annual conference of the department	Available representatives from: National medical insurance Medical syndicate Ministry of health
4. External Evaluators	Review program and courses Attending the final exam	Once before implementation Bi-annual report
5. Quality Assurance Unit	Annual program reviewer	

**Date of approval by department:**

**Signatures Program Coordinators**

*Assist. Prof. Dr. Aisha Mohamed Samir  
Lecturer. Dr. Rateba Said*

**Head of Department**

*Prof. Dr. Khaled Mahgoub*



