



Program Specification **For Master Degree in Occupational and Environmental** **Medicine**

Program type: Single

Program code: OEM 821

Department offering the program: Department of Occupational and Environmental
Medicine

Total credit points: 150 credit points

Academic year: 2016/2017

Program Coordinators: Lecturer. Dr. Rateba Said

Assistant Coordinator Assist. Prof. Dr. Aisha Mohamed Samir

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

I. Program aims

To ensure acquisition of the basic knowledge of environmental problems and toxicity related to industrial occupational hazards. To enable occupational physicians provide medical health care for the individuals at the workplace independent of age or gender. To provide professional physicians with appropriate background covering emerging diseases and common disasters and the possible ways of risk management. To facilitate the development and application of appropriate professional attitudes, communication and problem solving skills related to the field. To enable occupational physician with implementation of environmental control programs in the region. To ensure acquisition of professional skills related to disability evaluation for suitable job determination and related to design and implementation of rehabilitation and fitness programs.

II. Intended learning outcomes of program (ILOs)

A. Knowledge and understanding: By the end of the program the candidate should;

1. Describe the theories and fundamentals related to the field of occupational and environmental medicine and the related areas.
2. Identify the reciprocal influence between professional practices and their impacts on the environment.
3. Discuss the scientific developments in the field of occupational and environmental medicine.
4. Define the moral and legal principles of professional practices in the area of occupational
Demonstrate the basics and principles of quality in the professional
5. Practices in the field occupational and environmental medicine and environmental
medicine.
6. Determine the basics and principles of ethics in scientific research.

B. Intellectual skills: By the end of the program the candidate should be able to;

1. Analyze and evaluate information in the field of occupational and environmental
medicine used for solving problems.
2. Solve specialized problems in the field of occupational and environmental medicine in
the absence of some data.
3. Integrate the different facts for solving professional problems.
4. Formulate research studies and/or writing scientific methodology on a research problem.
5. Assess the risk in professional practices in the area of occupational and environmental
medicine.
6. Design plan for the development of performance in the field of occupational and
environmental medicine.
7. Provide professional decisions in various professional contexts.

C. Professional and practical skills: By the end of the program the candidates should be able to;

1. Perform the basic current and recent professional skills in the field of occupational and
environmental medicine.
2. Construct occupational and environmental medicine professional reports.
3. Evaluate the existing methods and tools in the area of occupational and environmental
medicine.

D. General and transferable skills: By the end of the program the candidates 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. Use the information technology to remain updated with the advances in knowledge 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 environmental projects.
7. Adopt the self and the continuous learning approaches.

III. Academic standards.

1. Academic reference standers: The academic standers of anatomy program is adopted and 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 medical degree from an approved institution. No experience in occupational medicine is necessary, although to sit for examination some relevant clinical experience is required. A written undertaking that these conditions can met is required for overseas student.

English language

Students whose first language is not English require a minimum of IELTS 6.0, with minimum of 5.0 in any one component, or TOEFL 525 paper-based or 263 computer-based with a score of 5 in the test of written English.

Computer requirements

Students are advised that they should have ready access to a personal computer with the following minimum specifications:

- Windows 2000/XP/Vista/W7.
- Soundcard and speakers/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.

Medical statistics

Students are advised to have an overview of basic scientific medical statistics to be able to proceed for advanced detailed needed for research practice.

V. Program structure and contents.

Program duration: Three years.

Program structure: Total Credit points 150

First part: 1.5 years (table 1)

52 credit points

Candidate should fulfill the following:

- Compulsory courses; one academic year (30 weeks Starts October)
 - Basic sciences courses 7 credit points
 - Basic Physiology.
 - Basic Epidemiology.
 - Basic Psychiatry.
 - Basic of Industrial Diseases, Occupational Medicine, and pathology.
 - General course 3 credit points
 - Internal Medicine
- Elective courses 1 credit points
- Scientific activities 1 credit points
- Residency training program Phase 1:
“Basic General for Internal Medicine ----” for one and half year 40 credit points

Second part: 1.5 years (table 2)

78 credit points

Candidate should fulfill the following:

- Compulsory courses
one academic year (30 weeks) 14 credit points
- Scientific activities 3 credit points
- Elective courses 1 credit points
- Residency training program phase 2:
“Special in Occupational and Environmental Medicine Department” for one and half year 60 credit points

Master Thesis: completed during second part

20 credit points.

Table 1: First part

Courses	Course modules	Credit points	total	ILOs
Compulsory courses (One academic year) - Occupational and Environmental Medicine				
Basic sciences courses	Basic Physiology.	1	10	A-1,3,5,6, C-1,3 .B-1,2,,5,6 D-1,3,4,7
	Basic Epidemiology.	0.5		A-1,5,6 B-1,2,3,4 C-3 D-2,3,7
	Basic Psychiatry	0.5		A-1,2,4, B-1,5,6,7 C-2 D-1,2,5,6
	Basic of Industrial Diseases and Occupational Medicine and pathology	5		A-1,2,3,4,5,6 B-1,2,3 C-1 D-1,2,3,6,7
General	Internal Medicine	3		A-2,5,6 B-1,2,5,7 C-1 D-1,2,3,4,5
Elective Courses Candidate choose 2 courses - Occupational and Environmental Medicine				
(MEDC)				
<ul style="list-style-type: none"> ▪ Critical Reading ▪ Scientific writing ▪ EBM ▪ Medical ethics ▪ Medical statistics II ▪ Hospital administration 		0.5 0.5 0.5 0.5 0.5 0.5	1	4-c,e,f,h,i
Scientific activities			1	4-c,d,e,h,i
Residency training program (phase 1 basic training)			40	3-f 4-a,b,c,d,e,f,g

Table 2: Part 2

Item		Credit points	ILOs.
Compulsory courses	Occupational and Environmental Medicine a-Occupational medicine b- Environmental medicine c- Toxicology	14	A-1,2,3,4,5,6 B-1,2,3,4,5,6,7 C-1,2,3 D-1,2,3,4,5,6,7 A-1,2,3,4,5,6 B-1,2,3,4,5,6,7 C-1,2,3 D-1,2,3,4,5,6,7 A-1,2,3,4,5,6 B-1,2,3,4,5,6,7 C-1,2,3 D-1,2,3,4,5,6,7
Elective Courses	Occupational Hazards Control Fitness and Rehabilitation Advanced Ergonomics/ Kinesiology	1	A-1,2,3,4,5,6,7 B-1,2,3,4,5,6 C-1,2,3 D-1,2,3,4,5,6,7
Scientific activities		3	
Master thesis		20	4-h,i
Residency training program (phase 2)		60	2-a,b,c,d 3-a,b,c,d 4-a,b,c,d,e,f,g

Residency (practical) Training Program

- **Basic Training:**

According to the Faculty of Medicine, Cairo University Bylaws for Post Graduate Programs (July 2009), all the candidates should have a basic clinical training in one of the internal medicine departments including some time in the intensive care unit or the toxicology centre for one academic year. During this period, the candidates should attend the compulsory courses and should complete the elective courses.

Special Training:

All candidates should complete the specialized practical training program in the 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

Master Thesis

All master-degree candidates should prepare a thesis in one of the following fields: occupational and environmental medicine – clinical toxicology – occupational hazards control and risk management – fitness and rehabilitation or kinesiology and ergonomics. The department and the ethical committees must approve the protocol of the research.

The master thesis is specialized research in the field of occupational and environmental medicine 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 Department and may include staff member from other specialties according to the necessities of research.

The research is undertaken over duration of 6 months followed by a power point presentation and evaluation by an approved by a committee of three professors comprising one of the supervising staff members together an internal evaluator from the same department and an external evaluator.

Scientific Activities:

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

- Journal club once every one- two weeks. All candidates should attend the journal clubs which are directed towards staying updated with the rapidly developing field of occupational medicine and clinical toxicology, therefore encouraging the life-long continuous learning.
- Seminars (including recent topics and controversial issues) once weekly. Students are expected to participate in the discussions.
- Scientific meetings arranged by the department: All candidates should attend the weekly scientific meetings as well as actively participate in the brain storming discussions to develop the knowledge and understanding and to enhance the intellectual skills. All candidates should present topics selected from pre-determined subjects according to schedule planned at the beginning of the academic year, thus helping develop the ability of applying new technology in teaching and develop general and transferable skills.
- Attendance of Thesis discussions: All candidates should attend the thesis presentations and discussions to be aware of the current and recent trends in the field of occupational and environmental medicine thus helping direct and focus his learning strategies towards the important and crucial facts.:
- All candidates should attend the faculty and department annual conferences in addition to other field-related conferences according to course interest with submission of an attendance certificate.

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

VI. Regulations for progression and program completion

After collecting the required credit points for the courses, first phase of practical training, and scientific activities, the candidate will be eligible to sit for the first part examination. In case the student fails to pass the examination, he may proceed in the practical training and can resubmit for the next examination. After passing the first part, the student submits a protocol for the Master Thesis at the beginning of the second part. Before applying for the final examination, he/she should finish the thesis and obtain an approval, complete the second phase of the training program, and obtain required credit points. The candidate will then receive the degree after passing the final examination. The Master degree must be obtained within a maximum of 6 years following the registration date.

VII. Assessment

Supervision & Monitoring of the Training Program:

According to the Faculty of Medicine, Cairo University Bylaws for Residency Training Programs, professors carry continuous assessment during the program. A residency-training program logbook will be kept for each student to document all his/her clinical, laboratory and/or operative/procedural activities as well as his/her participation in different scientific activities. The head of the department should allow the students to undergo the final examination when they complete their training program and collect the credit points needed.

A: ASSESSMENT TOOLS:

1. Final Exam Part I

Basic Occupational and Environmental Medicine and Toxicology

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 Physiology, Epidemiology and Psychiatry

A two-hour 3-paper written exam includes long and short essay questions and multiple choice questions as well as oral exams.

General Internal Medicine

A three-hour written exam includes long and short essay questions and multiple choice questions together with a clinical exam and an oral exam.

2. Final Exam Part 2

Occupational and Environmental Medicine

Two-day written exams include long and short essay questions and multiple choice and problem solving questions and clinical, practical and oral exams.

Elective Course

A one-hour written exam taking place as a part of the second day written exam including short essay questions and multiple choice and problem solving questions.

B: ASSESSMENT SCHEDULE:

TWO TIMES PER YEAR AT APRIL AND OCTOBER

First part:

The written examinations include three written papers over three days.

The first day : the written paper is a three-hour duration including the basic occupational and environmental medicine, toxicology and basic pathology.

The second day: the paper is a two-hour duration including the basic physiology, epidemiology and psychiatry.

The third day: three-hour duration paper covers the general internal medicine.

All written papers are in the form of long and short essay questions together with multiple choice and problem solving questions. The written exams are then followed by oral exams for basic physiology, epidemiology and psychiatry on separate days and an oral exam for the basic occupational and environmental medicine as well as oral and clinical exams for general internal medicine.

Second part

The written examinations include two written papers over two days.

The first day: three-hour written exam covers the occupational and environmental medicine including long and short essay questions and multiple choice and problem solving questions.

The second day: three-hour written exam is composed of a two-hour written paper for clinical toxicology and one-hour written exam for one of the elective courses in the form of short essay questions and multiple choice and problem solving questions.

The clinical occupational medicine comprises one day clinical exam covering the occupational and environmental medicine cases and covering the clinical toxicology cases.

The oral exam is held over two days so as to cover the occupational and environmental medicine on one day and the clinical toxicology on the other day.

Practical exams are held over two days to cover the ECGs and X-rays on one day and the pulmonary function test, audiograms and pathology slide on the other day

C: WHEIGHTING OF ASSESSMENT: Marks allocated to courses

(50 marks for each credit point)

Example

Course	Written	Oral	Clinical/practical	Total
First part				
Basic Physiology	20	15	----	100
Basic Epidemiology	20	15	----	
Basic Psychiatry	20	10	----	
Basic Occupational and Environmental Medicine and pathology	120	80	----	200
Internal Medicine	90	30	30	150
				450
Second part				
Occupational and Environmental Medicine	150	150	100 + 150	700
Toxicology	150			
Elective Course	50			50

Remarks

- It is mandatory to pass the four papers of the andrology exam separately
- Passing mark in a written exam is $\geq 60\%$

VIII. Evaluation of program intended learning outcomes:

Evaluator	Tool	Sample
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 the annual conference of the department	Available representatives from: <ul style="list-style-type: none"> • Army hospitals • National medical insurance • Medical syndicate • Ministry of health
4. External Evaluators	Review the program and courses Attending the final exam.	Once before implementation Bi-annual report
5. Quality Assurance unit	Annual program review	

Date of approval by department council

Signatures *Program Coordinators*

Assist. Prof. Dr. Aisha Mohamed Samir

Lecturer. Dr. Rateba Said

Head of Department

Prof. Dr. Khaled Mahgoub