PROGRAMME SPECIFICATION

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme Title & Code	**Postgraduate MD Degree of Industrial Medicine and Occupational Health (618)**
(2) Final award/degree	**M D degree**
(3) Department (s)	**Public Health and Community Medicine**
(4) Coordinator	**Prof. Emily kamel, Prof. Adel El-Weheidi, Dr. Nabil Joseph, Dr. Hala Samir**
(5) Internal evaluator (s)	**Prof. Soheir El-Bestar, Prof. Ahmed Niazi, Prof. Mona El-Shereif, Prof. Adel El-Weheidi**
(6) External evaluator (s)	**Prof. Mona Sobhy Siha** **Professor of Occupational and Environmental Medicine, Department of Occupational and Environmental Medicine, Faculty of Medicine, Cairo University**
(7) Date of approval by the Department`s council	
(8) Date of last approval of programme specification by Faculty council	**9/8/2016**

(B) Professional information

(1) Programme Aims:

The broad aims of the Programme are as follows: (either to be written in items or as a paragraph)

To produce specialist occupational physicians capable of:

1. Provision of occupational health services for workers and their families, both curative and preventive, at the workplace or from nearby facilities.
2. Improving working conditions and working environment conducive to workers' safety, health and well-being.
3. Prevention of work accidents and occupational diseases and control of workplace hazards.
4. Minimizing the consequences of occupational hazards, accidents and injuries, and occupational and work-related diseases through cure and rehabilitation services.
5. Adaptation of work to the capabilities of workers in the light of their state of physical and mental health with respect to the legislative framework.
6. Revising available data on working methods, chemical substances handled at work, exposure measurements, and first aid and emergency management with assessment of conditions of occupational hygiene.
7. Conducting occupational and environmental risk assessments in addition to research work to identify unrecognized workplace hazards.

(2) Intended Learning Outcomes (ILOs):

Intended learning outcomes (ILOs); Are four main categories: knowledge & understanding to be gained, intellectual qualities, professional/practical and transferable skills.

On successful completion of the programme, the candidate will be able to:

A- Knowledge and Understanding:

A1: Define occupational physician duties within the frame of Occupational health and industrial medicine.
A2: Recognize occupational health services with their essentially preventive functions responsible for advising the employer, the workers and their representatives for the requirements for safe and healthy working environment.
A3: Review the professional code of ethics to practice Occupational health.

A4: Identify physiology and prevention and control of various occupational physical hazards.
A5: Demonstrate elements of sanitary environment and its impact on worker's health.
A6: List risk assessment steps for different environmental hazards.

A7: Describe workplace psychosocial hazards that could compromise worker's mental health.
A8: Illustrate preventive measures for the identified risk factors for psychiatric disorders.
A9: Understand risk assessment principles and vocational rehabilitation of workers with psychiatric disabilities.

A10: Express mechanism, risk factors, clinical picture, sequelae, and prevention of injury at the workplace.
A11: List differential diagnosis and management steps of occupational diseases with special emphasis on occupational cancer.
A12: Revise international standards for permissible levels of workplace hazardous exposure.

A13: Recognize toxicokinetics, toxicodynamics, clinical picture and management of intoxication with industrial chemicals.
A14: Recall potential industrial hazardous exposure, their preventive and control measures.
A15: List occupational safety standards including laboratories.

A16: Define elements of occupational hygienic measures with emphasis on the role of biological monitoring.
A17: ~~Describe approaches for assessment of risk, fitness, and disability at work.~~
A18: Review the legislative framework for compensable occupational diseases and injuries.

C 7 Read and interpret chest X-ray, ECG and other investigations used in the diagnosis of occupational diseases.

C 8 Implement programs for prevention and control of occupational diseases.

C 9 Apply occupational and environmental epidemiological research.

C 10 Perform statistical analysis of data.

C 11 Apply programs targeting job stress and other psychosocial hazards at work.

Course 5: Industrial chemistry, Toxicology and Occupational Safety {PHPM 618 IC-T-OS}:

A27: Understand principles of toxicokinetics and toxicodynamics of industrial chemicals.

	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15	A16	A17	A18	A19	A20
Aim1	●	●	●														●	●		
Aim2					●	●						●			●	●				
Aim3				●			●	●		●	●			●						
Aim4				●						●							●			
Aim5			●						●											●
Aim6												●	●	●	●	●			●	
Aim7					●	●			●								●			

B- Intellectual skills:

B1: Realize the duties of occupational physicians and the services they provide at the workplace.
B2: Construct a research deisgn to study important occupational health problems with selection of proper statistical analysis.
B3: Consider problems of special working groups with respect to medical code of ethics.

B4: Distiguish various occupational physical hazards, their health impact and how to control them.
B5: Criticize egyptian environmental health program proposing upgrading efforts.
B6: Discriminate the role of occupational physician in relation to environmental health.

B7: Evaluate the state of mental health of workers with the application of risk assessment principles.
B8: Recognize possible sources of job stress with proposition of management program.
B9: Observe workplace psychiatric disorders of different etiologies with consideration of proper management.

B10: Distinguish different occupational lung disorders and occupational cancer which is mostly preventable.
B11: interpret findings of pulmonary function testing and chest X-ray according to ILO classification of pneumoconiosis.
B12: Illustrate causes of organ and system disorders (occupational/ non-occupational) and occupational injuries, their prevention and control measures.

B13: Differentiate between causes of poisoning using various investigations to reach the proper diagnosis.
B14: Propose an occupational health program for prevention of poisoning at the workplace with management guidelines.
B15: Observe available safety measures with regular supervision and monitoring of industrial process and personnel.

B16: Revise Egyptian laws for disability with consideration of other countries.
B17: Comply with assessment of fitness guidelines with reference to labor laws and compensation claims.
B18: Employ plans for practical risk assessment and occupational hygiene at the workplace.

B19: Recognize differential diagnosis of poisoning at the workplace, required investigation for diagnosis, and steps of risk assessment in cases of unidentified hazards.

B20: Propose suitable criteria, methods, and guidelines for assessment of fitness for work for specific jobs

	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19	B20
Aim1	●		●			●					●			●						
Aim2					●		●													
Aim3				●				●	●	●		●								
Aim4									●											
Aim5			●						●							●	●			●
Aim6													●		●			●	●	
Aim7		●		●	●		●	●							●			●	●	

C- Professional and practical skills:

C1: Practice duties of occupational health physician with cooperation with other members of the occupational health team.

C2: Apply workplace health promotion principles and other preventive and curative health services with advise to workers, their representative, and families.
C3: Create health-related database for workers with effective searching the web and conduction of research work with analysis of retrieved data.

C4: Manage various environmental health hazards in collaboration with environmental affairs agency.
C5: Respond to industrial incident with emergency personnel making use of the available information on different hazards.
C6: Assess environmental impact of an industrial activity on health to take the proper action if there is negative impact.

C7: Perform psychosocial work environment and health risk assessments at the workplace.
C8: Assess the general health status of workers with management of sickness absence.
C9: Implement workplace strategies to combat job stress and other mental health complaints.
C10: Investigate occupational accidents and injuries with evaluation of the available first aid facilities.
C11: Assess patients clinically with special concern for certain at risk groups and referral to specialist when needed.
C12: Conduct surveillance including biomonitoring of workers to diagnose and manage work-related and occupational disorders.

C13: Perform workplace risk assessments to design risk management plans.
C14: Manipulate cases of poisoning by first-aid measures with referral to toxicology centers when needed.
C15: Implement laboratory biosafety measures.

C16: Evaluate disability and fitness for work with advice for rehabilitation.
C17: Conduct health surveillance using simple investigations and screening tests.
C18: Carry out risk assessment of working environment generally and in special situations of concern.

	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16	C17	C18
Aim1	●	●						●			●					●	●	
Aim2		●		●			●		●						●			
Aim3				●	●				●	●					●			
Aim4								●	●							●		

Aim5											●					●		
Aim6			●		●									●				
Aim7			●			●	●					●	●				●	●

D- Communication & Transferable skill

D1: Learn teaching and learning skills.
D2: Design and deliver a teaching event/ or short course.
D3: Identify Intended learning outcomes of a teaching event.
D4: Teach large and small groups effectively.
D5: Select and use appropriate teaching resources.
D6: Give constructive effective feedback.
D7: Evaluate programs and events.
D8: Learn how to work as a team member and as a team leader.
D9: Develop critical thinking and peer-reviewing skills.

(3) Academic standards:

Academic standards for the programme are attached in Appendix I. in which **NARS** issued by the National Authority for Quality Assurance & Accreditation in Education are used. External reference points/Benchmarks are attached in Appendix II.

3.a- External reference points/ benchmarks selected :

- Faculty of Occupational Medicine UK. Specialist Training Curriculum for Occupational Medicine, August 2007. @www.fom.co.uk

3.b- Comparison of the specification to the selected external reference/ benchmark:

(e.g. all program aims of the Benchmark are covered by the current program)

- Almost all program aims of the Benchmarks are covered by the current program.
- The program courses are matched by more than 85% degree to those offered by the international universities except in the type of degree offered.

(4) Curriculum structure and contents:

4.a- Duration of the M D program: 6 semesters.

4.b- Program structure:

Doctorate program: Candidates should fulfill a total of …**60**……credit hours.

4.b.1: Number of credit hours:

First part: **5hrs** - Second part: **25 hrs** - Thesis: **15 hrs** - Clinical/Practical: **15 hrs** (including scientific activities).

4.b.2: Teaching hours/week: refer to table.

First part: Composed of one semester over **15 weeks.**

Second part: Composed of five semesters, over **60 weeks.**

(5) Program Courses:

First Part (One semester the first).

a- Compulsory courses: given in one semester over 15 weeks.

Course	Course	Total	Lectures	Practical	Total teaching	ILOs Cover

	Code	Credits			hours		
					Lectures	Practical	
Principles of Occupational & Environmental Medicine & Research Methodology	**PHPM 618 POEM-RM**	**2 Crs**	**Sem 1: 1½**	**1 ½ Cr**	**22½ hrs**	**15 hrs**	**A1-3, B1-3, C1-3, D1-7.**
Environmental Physiology & Environmental Health	**PHPM618 EP-EH**	**2 Crs**	**Sem 1: 1½**	**1½ Cr**	**22½ hrs**	**15 hrs**	**A4-6, B4-6, C4-6, D1-7.**
Occupational Mental & Psychological Health	**PHPM618 OMH-OHE**	**1 Crs**	**Sem 1: 1**	**none**	**15 hrs**	**-**	**A7-9, B7-9, C7-9, D1-7.**

Second part

a- **Compulsory courses** given on **4** semesters (third, fourth, fifth, and sixth semesters), over **60** weeks (thesis will be included in this table and will be on the second semester).

b- **Elective courses:** One elective course, given in the last semester (sixth).

Course	Course Code	Total Credits	Lectures	Practical	Total teaching hours		ILOs Covered
					Lectures	Practical	
Occupational and Environmental Diseases and Work Injuries	**PHPM 618 OED-WI**	(…21…) Lect: 13 Pract: 8	Sem3: 3 Sem4: 3 Sem5: 3 Sem6: 4	Sem3: 2 Sem4: 2 Sem5: 2 Sem6: 2	195 Lec	240 Prac	A10-12, B10-12, C10-12, D3-9
Industrial chemistry, Toxicology and Occupational Safety	**PHPM 618 IC-T-OS**	(…12…) Lect: 8 Pract: 4	Sem3: 2 Sem4: 2 Sem5: 2 Sem6: 2	Sem3: 1 Sem4: 1 Sem5: 1 Sem6: 1	120 Lec	120 Prac	A13-15, B13-15, C13-15, D3-9
Assessment of Risk, Medical Fitness and Disability, and Work Legislation Aspects	**PHPM 618 AR-MFD-LA**	(…6…) Lect: 3 Pract: 3	Sem3: 1 Sem4: ½ Sem5: ½ Sem6: 1	Sem3: 1 Sem4: ½ Sem5: ½ Sem6: 1	45 Lec	90 Prac	A16-18, B16-18, C16-18, D3-9
Elective Courses		(…1….) Lect: 1 Pract: none	Sem6: 1	none	15	none	A19-20, B19-20, D1-3.

Programme–Courses ILOs Matrix

Course Title	Program ILOs																																									
	Knowledge and Understanding (A)																				Intellectual Skills (B)																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Principles of Occupational Environmental Medicine & Research Methodology	•	•	•																		•	•	•																	
Environmental Physiology & Environmental Health				•	•	•																		•	•	•														
Occupational Mental & Psychological Health							•	•	•																		•	•	•												
Occupational and Environmental Diseases &Work Injuries										•	•	•																		•	•	•								
Industrial chemistry, Toxicology and Occupational Safety													•	•	•																		•	•	•					
Assessment of Risk, Medical Fitness and Disability, and Work Legislation Aspects																•	•	•																		•	•	•		
Elective: Occupational and Environmental Clinical Toxicology																			•																				•	
Elective: Guidelines of fitness to work																				•																				•

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the course titles or codes are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the program ILOs in question.

P.S. All courses` specifications are attached in Appendix III.

Course Title	Program ILOs																										
	Practical and Professional Skills (C)																		Transferable Skills (D)								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	1	2	3	4	5	6	7	8	9
Principles of Occupational & Environmental Medicine & Research Methodology	•	•	•																•	•							
Environmental Physiology & Environmental Health				•	•	•															•	•	•	•	•	•	•
Occupational Mental & Psychological Health							•	•	•												•	•	•	•	•	•	•
Occupational and Environmental Diseases & Work Injuries										•	•	•									•	•	•	•	•	•	•
Industrial chemistry, Toxicology and Occupational Safety													•	•	•						•	•	•	•	•	•	•
Assessment of Risk, Medical Fitness and Disability, and Work Legislation Aspects																•	•	•			•	•	•	•	•	•	•
Elective: Occupational and Environmental Clinical Toxicology																			•	•	•						
Elective: Guidelines of fitness to work																			•	•	•						

(6) Programme admission requirements:

- **General requirements:**

A graduate of Faculty of Medicine (National or regional universities) who completed a Foundation year of clinical practice in accredited hospitals. The graduation level should be at least "Good".

- **Specific requirements (if applicable): Not applicable.**

(7) Regulations for progression and programme completion:

Student must complete minimum of 45 hours for M Sc in order to obtain the M Sc degree, which include the courses of first and second parts, thesis and activities mentioned in the log book.

- Courses descriptions are included in Appendix I

Log book fulfillment:

- Student must fulfill a **minimum of 15 credit** of log book activities including clinical training, laboratory work and conferences attendance or speaking.
- Student must attend **at least 75% of** the program seminars and lectures held inside the department.
- Lectures and seminars of the previously described courses must be documented in the log book and signed by the lecturer.
- Works related to thesis must be documented in the log book and signed by the supervisors.
- Any workshops, conferences and scientific meetings should be included

(8) Evaluation of Programme's intended learning outcomes (ILOs):

Evaluator	Tools*	Sample size
Internal evaluator **(s)** Internal evaluator **(s)**	**Focus group discussion Meetings**	**Not Yet**
External Evaluator **(s)**	**Reviewing according to external evaluator checklist report.**	**Not Yet**
Senior student **(s)**	**None**	**Not Yet**
Alumni	**None**	**Not Yet**
Stakeholder **(s)**	**None**	**Not Yet**
Others	**None**	

* TOOLS= QUESTIONNAIRE, INTERVIEW, WORKSHOP, COMMUNICATION, E_MAIL

We certify that all information required to deliver this programme is contained in the above specification and will be implemented. All course specification for this programme are in place.	
Programme coordinator: Name: Prof. Emily Awad Kamel Responsible for Specialty	Signature & date:
Faculty Dean: Name: Prof. El-Said Abdel Hady	Signature & date:
Head of department: Name: Prof. Mohamed Azmy Khafagy	Signature & date:
Executive director of the quality assurance unit: Name: Seham Gad El-Hak	Signature & date:

P.S. The programme specification should have attached to it all courses specifications for all courses listed in the matrix.