



كلية الطب
جامعة أسيوط



Faculty of Medicine
Quality Assurance Unit

***Medical Doctorate (M.D.) Degree Program
and Courses Specifications for occupational
and environmental medicine***

(According to currently applied Credit point bylaws)

***Public Health and Community
Medicine Department
Faculty of medicine
Assiut University
2022-2023***

<i>Contents</i>	
<i>Item</i>	<i>Page</i>
Program Specification For MD occupational and environmental medicine 2022-2023	3
<u>A. Basic Information</u>	
<u>B. Professional Information</u>	4
<ol style="list-style-type: none"> 1. Program aims 2. Intended learning outcomes (ILOs) for the whole program 3. Program academic standards 4. Program external references 5. Program structure and contents 6. Courses contents and Matrixes (Annex 1) 7. Admission requirements 8. Progression and completion requirements 9. Assessment methods and rules 10. Program evaluation 11. Declaration 	
- Annex 1, Courses Specifications and Matrixes	22
First part	23
Course 1: Medical statistics.	
Course 2: Research methodology	30
Course 3: Medicolegal Aspects & Ethics in Medical Practice and Scientific Research	38
Course 4: Industrial chemistry.	45
Course 5: Environmental, human physiology	56
Second part:	70
Course 6 : Occupational and Environmental Medicine (advanced)	
Module1:occupational chest diseases	
Module2:occupational audio logy	
Module3:occupational dermatology	
Module4: Clinical toxicology.	
Course 7:basics of Internal medicine	114

- Annex 2, Program Academic Reference Standards (ARS)	128
- Annex 3, Teaching methods	133
- Annex 4, Assessment methods	136
- Annex 5, Program evaluation tools	140
- Annex 6 Matrixes: I-General Academic reference standards(GARS) for postgraduates versus Program ARS 1-Graduate attributes 2-Academic Standards II-Program ARS versus program ILOs III- Program Matrix.	142
- Annex 7, Additional information.	163



Assiut University
Faculty of Medicine
Quality Assurance Unit (QAU)



كلية الطب
جامعة أسيوط

M. D. degree of Occupational and Environmental medicine.

A. Basic Information

- + Program Title: Occupational and Environmental medicine
- + Nature of the program: Single.
- + Responsible Department: public health and community medicine Department.
- + Program Academic Director (Head of the Department):
Prof. Eman Morsy Mohamed

- + Coordinator (s):
 - Principle coordinator Dr: Ahmmed Hany
 - Assistant coordinator (s) Dr: Shimaa Abdelsamee
 - Internal evaluators: professor Dr: Hosney shaban
 - External evaluator (s): professor Dr: Hussein Hassan Zayet.(Cairo university)
- + Date of Approval by the Faculty of Medicine Council of Assiut University: 23-9-2014
- + Date of most recent approval of program specification by the Faculty of Medicine Council of Assiut University: 27-11-2022
- + Total number of courses: 9 courses
5 courses in the 1st part & 2 courses in the 2nd part and 2 elective courses.

B. Professional Information

1- Program aims

1/1. To provide Proficient knowledge and skills required to practice occupational and environmental medicine.

1/2- Graduates of the programs will have acquired the knowledge and skills needed to practice occupational medicine in the occupational health facilities of the government and in the community.

1/3- To introduce candidates to the basics of scientific medical research.

1/ 4-To provide the candidates with skills:

- Enabling them to start professional careers as specialists in Egypt.
- Making them recognized as specialists abroad.
- Enabling them to pursue higher studies and subspecialties.
- Enabling them to understand and get the best of published scientific research and do their own.

2-Intended learning outcomes (ILOs) *for the whole program:*

2/1 Knowledge and understanding:

- A. Demonstrate in-depth knowledge and understanding of theories, basics and updated biomedical, clinical epidemiological and socio – behavioral science relevant to his speciality as well as the evidence – based application of this knowledge to patient care .
- B. Explain basics, methodology, tools and ethics of scientific medical, clinical research.
- C. Mention ethical, medico logical principles and bylaws relevant to his practice in the field of occupational and environmental medicine.

- D. Mention principles and measurements of quality assurance and quality improvement in medical education and in clinical practice of the concerned occupational and environmental medicine.
- E. Mention health care system, public health and health policy, issues relevant to this speciality and principles and methods of system – based improvement of patient care in common health problems of the field of occupational and environmental medicine.

2/2 Intellectual outcomes

- A. Apply the basic and clinically supportive sciences which are appropriate to the speciality related conditions / problem / topics.
- B. Demonstrate an investigatory and analytic thinking “problem – solving “approaches to clinical situation related to speciality.
- C. Plan research projects.
- D. Write scientific papers.
- E. Participate in clinical risk management as a part of clinical governance.
- F. Plan for quality improvement in the field of medical education and clinical practice in his speciality.
- G. Create / innovate plans, systems, and other issues for improvement of performance in his practice.
- H. Present and defend his / her data in front of a panel of experts.
- I. Formulate management plans and alternative decisions in different situations in the field of the speciality.

2/3 Skills

2/3/1 Practical skills (Patient Care)

- A. Provide extensive level of patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. *p.s.* Extensive level means in-depth understanding from basic science to evidence – based clinical application and possession of skills to manage independently all problems in field of practice.
- B. provides extensive level of patient care for patients with all common diagnoses and for uncomplicated procedures related to occupational and environmental medicine speciality.
- C. provides extensive level of patient care for non-routine, complicated patients and under increasingly difficult circumstances, while demonstrating compassionate, appropriate and effective care.
- D. Perform diagnostic and therapeutic procedures considered essential in the field of occupational and environmental medicine.
- E. Handles unexpected complications, while demonstrating compassion and sensitivity to patient needs and concerns.
- F. Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families in occupational and environmental medicine related situations.
- G, Gather essential and accurate information about patients of occupational and environmental medicine related conditions.

- H. Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence and clinical judgment for occupational and environmental medicine related conditions.
- I. Develop and carry out patient management plans for occupational and environmental medicine related conditions.
- J. Counsel and educate patients and their families about speciality related conditions.
- K. Use information technology to support patient care decisions and patient education in all occupational and environmental medicine related clinical situations.
- L. Perform competently all medical and invasive procedures considered essential for occupational and environmental medicine related conditions / area of practices.
- M. Provide health care services aimed at preventing occupational and environmental medicine related health problems.
- N. Lead health care professionals, including those from other disciplines, to provide patient-focused care in occupational and environmental medicine related conditions.
- O. Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets.(Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records)

2/3/2 General skills

Including:

- Practice-based Learning and Improvement
- Interpersonal and Communication Skills
- Professionalism
- Systems-based Practice

Practice-Based Learning and Improvement

- A. Demonstrate the competency of continuous evaluation of different types of care provision to patients in the different area of his field
- B. Appraise scientific evidence.
- C. Continuously improve patient care based on constant self-evaluation and life-long learning.
- D. Participate in clinical audit and research projects.
- E. Practice skills of evidence-based Medicine (EBM).
- F. Educate and evaluate students, residents and other health professionals.
- G. Design logbooks.
- H. Design clinical guidelines and standard protocols of management.
- I. Appraise evidence from scientific studies related to the patients' health problems.
- J. Apply knowledge of study designs and statistical methods to the appraisal of clinical studies.

K. Use information technology to manage information, access on-line medical information; for the important topics.

Interpersonal and Communication Skills

L. Master interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals, including:-

- Present a case.
- Write a consultation note.
- Inform patients of a diagnosis and therapeutic plan completing and maintaining comprehensive.
- Timely and legible medical records.
- Teamwork skills.

M. Create and sustain a therapeutic and ethically sound relationship with patients.

N. Elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.

O. Work effectively with others as a member or leader of a health care team or other professional group.

Professionalism

P. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society.

Q. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of

patient information, informed consent, and business practices.

R. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.

Systems-Based Practice

S. Work effectively in health care delivery settings and systems related to occupational and environmental medicine including good administrative and time management.

T. Practice cost-effective health care and resource allocation that does not compromise quality of care.

U. Advocate for quality patient care and assist patients in dealing with system complexities.

V. Design, monitor and evaluate specification of under and post graduate course and programs.

W. Act as a chair man for scientific meetings including time management.

3- Program Academic Reference Standards (ARS) (Annex 2)

Academic standards for Medical Doctorate (MD) degree occupational and environmental medicine

Assiut Faculty of Medicine developed MD degree programs' academic standards for different clinical specialties.

In preparing these standards, the General Academic Reference Standards for post graduate programs (GARS) were adopted. These standards set out the graduate attributes and academic characteristics that are expected to be achieved by the end of the program.

These standards were approved by the faculty council on 20/3/2010. These standards were revised and approved without changes by the Faculty Council on 23-9-2014. These standards were recently revised and reapproved without changes by the Faculty Council on 27-11-2022.

4- Program External References(Benchmarks)

1. ACGME (Accreditation Council for Graduate Medical Education).

http://www.acgme.org/acWebsite/navPages/nav_Public.asp

2. Hong Kong of community Medicine

http://www.cuhk.edu.hk/med/cmd/occmed/msc_occ_med.html

3. AMERICAN COLLEGE OF OCCUPATIONAL AND ENVIRONMENTAL MEDICINE.

www.acoem.org/

4. <https://www.ilo.org/global/lang--en/index.htm>

5. <https://www.osha.gov/>

6. Current Occupational & Environmental Medicine, 5th Edition, Joseph Ladou.2014

7. WHO,2019: available at
https://www.who.int/occupational_health/activities/occupational_work_diseases/en/

5- Program Structure

A. Duration of program: 4-6 years

B. Structure of the program:

Total number of credit points: = 420 CP

Master degree: 180 credit point

Didactic #: 37 (23.1%), practical 123 (76.9%), total 160 CP

Thesis and researches: 80 CP (33.3%)

First part

Didactic 10 (100%), practical 0 (0 %), total 10 CP

Second part

Didactic 24, (16.3 %), practical 123 (83.7 %), total 147 CP

Elective courses: 3 credit points

#Didactic (lectures, seminars, tutorial)

According the currently applied bylaws:

Total courses: 160 credit point

Compulsory courses: 157 credit point (98.1%)

Elective courses: 3 credit point (1.9%)

	Credit point	% from total
Basic science courses	10	4.1%
Humanity and social courses	3	1.2%
Speciality courses	147	61.3%
Others (Computer, ...)	-	0
Field training	123	51.3%
Thesis	40	16.7%
2 published researches	40	16.7%
Master degree	180	

C- Program Time Table

Duration of program 4 years divided into

- Part 1

Program-related basic science courses

Program-related basic science courses

- Medical statistic

- Research methodology

- Medicolegal Aspects and Ethics in Medical Practice and Scientific Research

Students are allowed to sit the exams of these courses after 6 months from applying to the M D degree.

Students are allowed to sit the exams of the remaining basic science courses after 12 months from applying to the MD degree.

Thesis and 2 published researches

For the M D thesis;

MD thesis subject should be officially registered within 1 year from application to the MD degree,

Discussion and acceptance of the thesis should not be set before 24 months from registering the M D subject;

It could be discussed and accepted either before or after passing the second part of examination

- Part 2

Program –related speciality courses and ILOs

Students are not allowed to sit the exams of these courses before 4 years from applying to the MD degree.

Two elective courses can be set during either the 1st or 2nd parts.

The students pass if they get 50% from the written exams and 60% from oral exams, 60% from clinical /practical exams of each

course and 60% of summation of the written exams, oral and clinical/practical exams of each course

Total degrees 1700 marks.

500 marks for first part

1200 for second part

Written exam 40% - 70%.

Clinical /practical and oral exams 30% - 60%.

D- Curriculum Structure: (Courses):

Levels and courses of the program:

Courses and student work load list	Course Code	Core Credit points		
		Lectures	training	total
First Part				
Basic science courses (10 CP)				
Course1: Medical statistics.	FAC309A	1CP	-	1CP
Course 2: Research methodology	FAC309B	1CP	-	1CP
Course3:Medicolegal Aspects & Ethics in Medical Practice and Scientific Research.	FAC310C	1CP	-	1CP
Course 4: Industrial chemistry.	OCC309A§	2CP	1CP	3CP
Course 5: Environmental, human physiology	OCC309B§	3CP	1CP	4CP
Elective courses*		3 CP		
- Elective course 1	1.5CP			
- Elective course 2	1.5CP			
Thesis		40 CP		
Published researches**		40 CP		
Second Part				
Speciality courses 24 CP				
Speciality Clinical Work (log Book) 123 CP				
Speciality Courses				
Course 6 : Occupational and Environmental Medicine (advanced)	OCC309C#§	24		
Module1:occupational chest diseases		8	37	45
Module2:occupational audio logy		6	27	33
Module3:occupational dermatology		4	25	29
Module4: Clinical toxicology.		4	18	22
Course 7 Internal medicine	OCC318	2	16	18
Speciality Clinical Work (123 CP)			123	
Total of second part				147

#Didactic (lectures, seminars, tutorial)

* Elective courses can be taken during either the 1st or 2nd parts.

Student work load calculation:

Work load hours are scheduled depending on the type of activities and targeted competences and skills in different courses

Elective Courses#:

- Advanced medical statistics.
- Evidence based medicine.
- Advanced infection control.
- Quality assurance of medical education.
- Quality assurance of clinical practice.
- -Hospital management

Two of the above mentioned courses are prerequisites for fulfillment of the degree.

3. Thesis / Researches:

40 CP are appointed to the completion and acceptance of the thesis.

** Another 40 points are appointed to acceptance or publication of one research from the thesis in international indexed medical journals or publication of 2 researches from the thesis in local specialized medical journals.

6. Courses Contents (Annex 1)

The competency based objectives for each course/module/rotation are specified in conjunction with teaching/training methods, requirements for achieving these objectives and assessment methods.

See Annex 1 for detailed specifications for each course/ module
Annex 6 II: Program Matrix

7-Admission requirements

 **Admission Requirements (prerequisites) if any :**

I. General Requirements:

- **Master degree in occupational and environmental medicine.**

II. Specific Requirements:

- **Fluent in English (study language)**

-

VACATIONS AND STUDY LEAVE

The current departmental policy is to give one month prior to exam

As regulated by the postgraduate studies rules and approved by the faculty vice dean of post graduate studies and the faculty and university councils.

FEES:

As regulated by the postgraduate studies rules and approved by the faculty vice dean of post graduate studies and the faculty and university councils.

8-Progression and completion requirements

- + Examinations of the first part (Medical statistic, Research methodology and Medicolegal Aspects and Ethics in Medical Practice and Scientific Research) could be set at 6 months from registering to the MD degree.
- + Students are allowed to sit the exams of the remaining essential courses of the first part after 12 months from applying to the MD degree.
- + Examination of the second part cannot be set before 4 years from registering to the degree.
- + Discussion of the MD thesis could be set after 2 years from officially registering the MD subject, either before or after setting the second part exams.
- + The minimum duration of the program is 4 years.

The students are offered the degree when:

1. Passing the exams of all basic science, elective and speciality courses of this program as regulated by the post graduates approved rules by the faculty council.
2. Completing all scheduled CP and log book (minimum 80%).
3. Discussion and acceptance of the MD thesis.
4. Acceptance or publication of one research from the thesis in international indexed medical journals or publication of 2 researches from the thesis in local specialized medical journals.

9-Program assessment methods and rules (Annex IV)

Method	ILOs measured
Written examinations: Structured essay questions Objective questions: MCQ Problem solving	K & I
Clinical: Long/short cases OSCE	K ,I, P &G skills
Structured oral	K ,I &G skills
Logbook assessment	All
Research assignment	I &G skills

Weighting of assessments:

Courses		Degrees			
Courses	Course code	Written Exam	Oral *	Practical / Clinical Exam	Total
First Part					
Basic science courses:					
Course1:Medical Statistics	FAC309A	35	15		50
Course2:Research Methodology	FAC309B	35	15		50
Course3:Medicolegal Aspects & Ethics in Medical Practice and Scientific Research	FAC310C	35	15		50
Course4:Industrial chemistry	OCC309A§	100	25	25	150
Course5: Human and environmental physiology	OCC309B§	100	50	50	200
Total of the first part					500
Second Part					
	Course code	written	oral	clinical	total
Course 6 :	OCC309C#§				
Module1:occupational chest diseases(paper1)		200	90	90	380
Module2:occupational audio logy(paper2)		150	75	75	300
Module3:occupational dermatology(paper3)		100	55	55	210
Module4: Clinical toxicology.(paper4)		100	55	55	210
Course 7: Internal medicine(paper5)	OCC318	50	25	25	100
Total of the second part		600	300	300	1200
Elective course 1		50	50		100
Elective course 2		50	50		100

* 25% of the oral exam for assessment of logbook

Total degree 1900

500 marks for first part

1200 for second part

+ Written exam 54.2% (650 marks)

+ Clinical /practical and oral exams 45.8% (550 marks)

- **Examination system:**

- **First part:**

- Written exam 2 hours in Medical Statistics and Research Methodology + oral examination
- Written exam 1 hours in Medicolegal Aspects and Ethics in Medical Practice and Scientific Research + oral examination
- Written exam in remain 2 essential courses, 3 hours for each + oral and practical exam.

- **Second part:**

- Written exam 3 hours in occupational chest diseases & oral and practical examination
- Written exam 3 hours in Occupational skin Diseases & oral and practical examination
- Written exam 3 hours in Occupational audiological Diseases & oral and practical examination
- Written exam 3 hours in clinical toxicology & internal medicine Diseases & oral and practical examination
- Written exam 2 hours in internal medicine & oral and clinical /practical examination

- **Elective courses**

- Written exam one paper 1 hour in Elective course 1 + Oral & Practical exam
- Written exam one paper 1 hour in Elective course 2 + Oral & Practical exam.

10-Program evaluation

By whom	method	sample
Quality Assurance Unit	Reports Field visits	#
External Evaluator (s):According to department council External Examiner (s): According to department council	Reports Field visits	#
Stakeholders	Reports Field visits Questionnaires	#
Senior students	Questionnaires	#
Alumni	Questionnaires	#

#Annex 5 contains evaluation templates and reports (Joined in the departmental folder).

11-Declaration

We certify that all of the information required to deliver this program is contained in the above specification and will be implemented.

All course specifications for this program are in place.

Contributor	Name	Signature	Date
▪ Program Principle Coordinator:	Prof.dr.Ahammed Hany		
▪ Head of the Responsible Department (Program Academic Director):	Prof.dr. Eman Morsy Mohamed		

Annex 1, Specifications for Courses / Modules

Annex 1: specifications for courses

First Part

- 1) Course 1: Medical statistics
- 2) Course 2: Research Methodology
- 3) Course 3: - Medicolegal Aspects and Ethics in Medical Practice and Scientific Research
- 4) Course 4: Industrial chemistry.
- Course 5: Human and environmental physiology.

Course 1: Medical statistics

Name of department: Public Health and Community Medicine
Faculty of medicine
Assiut University
2022-2023

1. Course data

- + Course Title: Medical statistics
- + Course code: FAC309A
- + Specialty: offered to all clinical and academic specialties
- + Number of credit points: 1 credit point (0.5 didactics and 0.5 practical)
- + Department (s) delivering the course: Pubic Health and Community Medicine
- + Coordinator (s):
 - Course coordinator: Prof. Farag Mohammed Moftah
 - Assistant coordinator (s):
Prof. Medhat Araby Khalil Saleh
- + Date last reviewed: January -2022
- + Requirements (pre-requisites) if any:
 - Completed Master degree in any of the academic or clinical departments of Medicine.

2. Course Aims

Enable graduate students to use statistical principles to improve their professional work and develop the concept of critical interpretation of data

3. Intended learning outcomes (ILOs): To be able to use statistical principals to manage data

A knowledge and understanding

ILOS	Methods of teaching/ learning	Methods of Evaluation
A. List the types of variables	Lecture and discussion	Written examination
B. Identify the methods of data collection	Lecture and discussion	Written examination
C. Describe the different sampling strategies	Lecture and discussion	Written examination
D. Identify types of tabular and graphic presentation of data	Lecture and discussion	Written examination
E. Identify measures of central tendency and dispersion	Lecture and discussion	Written examination
F. Identify the characters of normal distribution curve.	Lecture and discussion	Written examination
G. Detect the difference between parametric and non-parametric tests	Lecture and discussion	Written examination
H. Identify the concepts of correlation and regression	Lecture and discussion	Written examination

B. intellectual

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Describe the normal curves.	Lecture & Discussions	Written examination
B. Describe and summarize data	Lecture & Discussions	Written examination
C. Select the proper test of significance	Lecture & Discussions	Written examination
D. Interpret the proper test of significance	Lecture & Discussions	Written examination
E. Describe the difference between parametric and non-parametric tests	Lecture & Discussions	Written examination

C. Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Design data entry files.	Tutorial on SPSS	Assignments SPSS exam
B. Validate data entry.	Tutorial on SPSS	Assignments SPSS exam
C. Manage data files.	Tutorial on SPSS	Assignments SPSS exam
D. Construct tables and graphs.	Tutorial on SPSS	Assignments SPSS exam
E. Calculate measures of central tendency and dispersion.	Tutorial on SPSS	Assignments SPSS exam
F. Select, apply and interpret the proper test of significance.	Tutorial on SPSS	Assignments SPSS exam

D general skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Appraise scientific evidence	Discussions	Research assignment
B. Use information technology to manage information, access on-line medical information; for the important topics.	tutorial	Research and audits' assignment

**4. Course contents (topic s/modules/rotation
Course Matrix**

Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skills C	General Skills D
Introduction	A-F	A-D	-	A&B
Tables and graphics	D	A-D	-	A&B
Sampling	C	-	-	A&B
Methodology of data collection	B	-	-	A&B
Type of variables	A	-	-	A&B
Proportion test& Chi-square test	E,F	C&D	-	A&B
Student T test& Paired T test	E,F	C&D	F	A&B
ANOVA test	E,F	C&D	F	A&B
Non parametric tests	E,F	C&D	F	A&B
Discrimination analysis factor analysis	E,F	C&D	-	A&B
SPSS Introduction	A-F	A-D	-	A&B
Data entry and cleaning of data	A	A-D	A-C	A&B
Transforming of variables	A	A&B	A-C	A&B
Descriptive statistics	D	A-D	D&E	A&B
Graphic presentation	D	A&B	D	A&B
Chi square and interpretation of results	E,F	C&D	F	A&B
Correlation Regression	E,F	C&D	F	A&B
Multiple and logistic Regression	E,F	C&D	F	A&B

5. Course Methods of teaching/learning

1. Lectures
2. Assignments
3. Discussions
4. Exercises
5. Tutorial on SPSS v.16

6. Course assessment methods:

- i. **Assessment tools:**
 1. Attendance and active participation
 2. Assignment
 3. Practical SPSS examination
 4. Written exam
- ii. **Time schedule:** After 6 months from applying to the M D degree.
- iii. **Marks:** 50 (35 for written exam and 15 for practical exam).

7. List of references

i. Lectures notes

Department lecture notes

ii. Essential books

i. Essential books

- Medical Statistics: Book by Ramakrishna HK 2016
- Janet Peacock and Philip Peacock. Oxford Handbook of Medical Statistics (second edition.) Publisher: Oxford University Press, Print Publication Date: Nov 2010 Print ISBN-13: 9780199551286, Published online: Jun 2011. DOI: 10.1093/med/9780199551286.001.0001
- Leslie E. Daly MSc, PhD, Hon MFPHM,, Geoffrey J. Bourke MA, MD, FRCPI, FFPHM, FFPHMI, Interpretation and Uses of Medical Statistics, Fifth Edition, First published:1 January 2000, Print ISBN:9780632047635 |Online ISBN:9780470696750 |DOI:10.1002/9780470696750
- Marcello Pagano, Kimberlee Gauvreau: Principles of Biostatistics second edition published in 2000 by Brooks/Cole and then Cengage Learning. CRC Press, Feb 19, 2018 - Mathematics - 584 pages.

iii- Recommended books

- Ji-Qian Fang (Sun Yat-Sen University, China) Handbook of Medical Statistics: <https://doi.org/10.1142/10259> | September 2017. Pages: 852
- Robert H. Riffenburgh: Statistics in Medicine 4th Edition (2020). Evidence Based Medicine How to practice and teach EBM.
- Discovering Statistics Using IBM SPSS Book by Andy Field, 2013.

i. Periodicals, Web sites, etc

iv. **Periodicals , etc** Statistics in Medicine - Wiley Online Library

v. **Web sites** <https://www.phc.ox.ac.uk/research/medical-statistics>










8. Signatures

Course Coordinator: Farag Mohammed Moftah	Head of the Department: Prof. Eman Morsy Mohamed
Date: 10-1-2022	Date: 10-1-2022

Course 2: Research Methodology

Name of department: *Public Health and Community Medicine*
Faculty of medicine
Assiut University
2022-2023

1. Course data

-  **Course Title: Research methodology**
-  **Course code: FAC309B**
-  **Specialty: Offered to all clinical and academic specialties**
-  **Number of credit points: 1 credit point (0.75 didactics and 0.25 practical)**
- 
-  **Department (s) delivering the course: Department of public health**
-  **Coordinator (s):**
 - **Course coordinator:** Prof. Mahmoud Attia
- Assistant coordinator (s):** Prof. Ekram Mohamed
 - Prof. Medhat Araby Khalil
-  **Date last reviewed: January 2022**
-  **Requirements (prerequisites) if any:**
 - **Completed Master degree in any of the academic or clinical departments of Medicine.**

2. Course Aims

To provide graduate students with the skills of:

- planning and implementing sound research
- writing a scientific research proposal

3. Intended learning outcomes (ILOs)

A knowledge and understanding

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Explain differences between different study designs.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments Practical exam
B. Identify sources and types of bias in research.	Lecture and discussion Practical sessions	Written exam Log book assignments Practical exam
C. Identify methods of data collection.	Lecture and discussion Practical sessions	Written exam Log book assignments
D. Select and design valid measurement tools for research.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments Practical exam
E. Explain ethical issues in conducting research on human subjects.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments
F. List the steps involved in proposal writing.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments Practical exam
G. Identify a research problem within a conceptual framework.	Lecture Discussion	Written exam Log book assignments Practical exam
H. Use the web sources to do a literature search	Practical tutorial on web	Log book assignment

I. Describe the rules of authorship in scientific writing.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments
J. Select the appropriate study design for the research question.	Lecture Practical sessions	Written exam Practical exam
K. Minimize bias in designing research.	Lecture	Written exam
L. Screening & theoretical background	Lectures	Written exam Practical exam
M. Mention the basic ethics for conducting a research and medicolegal principles relevant to data confidentiality.	lectures seminar	Written exam Practical exam

B. intellectual

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A- Apply basic science & knowledge for appraising scientific literature.	Discussions & seminars	Written exam Practical exam
B- Design research and present study data, in seminars.	lecture seminar	log book assignments
C- Design suitable epidemiological study.	lecture seminar	log book assignments
D- Design strategies for resolving ethical concerns in research, law, and regulations.	lecture Workshops	Written exam log book assignments
E- Apply coherently synthesize ideas and integrate lateral and vertical thinking.	lecture Workshops	log book assignments
F- Evaluate screening tests and interpreting their uses in different population.	lecture	Written exam Practical exam

C. Practical skills

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A- Conduct epidemiological studies, screening and surveys.	lectures seminar	written exam log book assignments
B- Identify steps required in fielding the study.	Lecture	Assignments Written exam
C- Managing data collection team.	lectures seminar	log book assignments
D- Identify steps required for calculation sensitivity, specificity, positive predictive value, negative predictive value, accuracy of a screening test.	Lecture Practical sessions	Assignments Written exam Practical exam
E- Be able to define and apply the epidemiologic criteria of causality and be able to distinguish between a measure of association and evidence of causality.	Lecture Practical sessions	Assignments Written exam Practical exam
F- Synthesize information from multiple sources for research writing and the ability to perform paper critique .	Lecture Practical sessions	Assignments Written exam Practical exam
G- Identify bias and confounding in epidemiological study designs, their types and ways to control them in various types of biases.	Lecture Practical sessions	Assignments Written exam Practical exam

D General skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A- Scientific paper and proposal writing skills: be able to write an introduction, objectives and the methodological section.	Tutorial	Written examination
B- Learn authorship ethical rules.	Tutorial	Written examination
C- Perform practice-based improvement activities using a systematic methodology (audit, logbook, critical appraisal)	- Lectures - Practical sessions - Discussion - Readings	critical appraisal
D- Appraise evidence from scientific studies(journal club)	- Lectures - Practical sessions - Discussion - Readings	critical appraisal
E- Conduct epidemiological studies, screening and surveys.	- Lectures - Practical sessions - Discussion - Readings	attendance and participation
F- Facilitate training of junior students and other health care professionals in different screening activities.	Field work Participation in projects	attendance and participation

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
G- Maintain ethically sound relationship with community members.	- Lectures - Practical sessions - Discussion - Readings	Written exams
H- Provide information using effective nonverbal, explanatory, questioning, and writing skills.	- Lectures - Practical sessions - Discussion - Readings	Written exams Practical exams
I- Present results of researches in seminars.	- Lectures - Practical sessions - Discussion - Readings	Log book assignments

Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
J- Demonstrate respect, compassion, and integrity to the needs of society.	- Lectures - Discussion - Readings	Written exams
K- Manage potential conflicts of interest encountered by practitioners, researchers, and organizations.	- Lectures - Discussion - Readings	Written exams
L- Design strategies for resolving ethical concerns in research, law, and regulations.	Lectures - Discussion - Readings	Written exams Practical exams
M- Demonstrate ways to control for confounding in the analysis phase of a study	Lectures - Discussion - Readings	Written exams Practical exams
N- Demonstrate a commitment to ethical principles including confidentiality of participants' information and informed consent.	Lectures - Discussion - Readings	Written exams
O- Assess ethical considerations in developing communications and promotional initiatives.	- Lectures - Discussion - Readings	Written exams

4. Course contents (topic s/modules/rotation Course Matrix

Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge	Intellectual	Practical skills	General Skills
	A	B	C	D
Over view on research conduction and research ethics	A&E	A-D	A-C	C-G, I,L&M-O
How to write a research proposal	F,I	E	F	A-C&H
Observational study design	A& D	B & C	D	E & F
Experimental study design	A& D	B & C	B	E & F
Evaluation of diagnostic tests (Screening)	L	A	B& E	F
Systematic reviews and meta analysis	G, H & M	E& F	F	C, D
Confounding, bias & effect modification	B & K	D	E & G	M

5. Course Methods of teaching/learning:

1. Lectures
2. Assignments
3. Discussion
4. Exercises

6. Course assessment methods:

i. Assessment tools:

1. Attendance and participation
2. Log book assignments
3. Written examination
4. Practical examination

ii. Time schedule: After 6 months from applying to the M D degree.

iii. Marks: 50 (35 for written exam and 15 for oral exam).

7. List of references

i. Lectures notes

- Department lecture notes

ii. Essential books

- Research Design: Qualitative, Quantitative and Mixed Methods Approaches 4th Edition by John W. Creswell SAGE Publications, Inc; 4th edition (January 1, 2014)
- Research methodology: A step – by – step Guide for Beginners. Ranjit Kumar, 2020. Second edition <https://books.google.com.eg/books?>
- Medical Research Essentials Rania Esteitie, McGraw Hill Professional, third edition, Feb 5, 2014 - Medical - 104 pages
- Research Methodology in the Medical and Biological Sciences Petter Laake, Haakon Breien Benestad, Bjorn R. Reino Olsen, 4th edition , Academic Press, Nov 5, 2007 - Science - 512 pages

ii. Recommended books

- Research Methods in Education 7th Edition, by Louis Cohen, Lawrence Manion, Keith Morrison Publisher: Routledge; (April 22, 2011) www.routledge.com/textbooks/cohen7e.
- Research Methodology: A Practical and Scientific Approach Vinayak Bairagi, Mousami V. Munot · 2019, Research Methodology: A Practical and Scientific Approach - Google Books

- Based Medicine How to practice and teach EBM. David Sachett, Sharon E. Straus, W. Scott Richardson , William Rosenberg R.Brain Haynes
- Dissertation workshop open courseware JHSPH

8. Signatures

Course Coordinator: Prof. Mahmoud Attia	Head of the Department: Prof. Eman Morsy Mohamed
Date: 10-1-2022	Date: 10-1-2022

Course 3: Medicolegal Aspects and Ethics in Medical Practice and Scientific Research

Name of department: Forensic medicine and clinical toxicology
Faculty of medicine
Assiut University
2022-2023

1. Course data

- ✚ **Course Title: Medicolegal Aspects and Ethics in Medical Practice and Scientific Research**
- ✚ **Course code: FAC310C**
- ✚ **Speciality: *General medicine, Special medicine, Pediatrics, Public health, Oncology and Rheumatology and critical care Medicine (1st part).***
- ✚ **Number of credit points: 1 credit point**
- ✚ **Department (s) delivering the course: Forensic Medicine and Clinical Toxicology**

- ✚ **Coordinator (s):**
 - **Course coordinator:**
Prof. Ghada omran
 - **Assistant coordinator (s) Assist.**
Prof. Zaghoul Thabet

- ✚ **Date last reviewed: 4-2022**
- ✚ **Requirements (prerequisites) if any :**
 - **Completed Master degree.**

2. Course Aims

To describe the basic ethical and medicolegal principles and bylaws relevant to practice in the field of General medicine, Special medicine, Pediatrics, Public health, Oncology and Rheumatology

3. Intended learning outcomes (ILOs):

A knowledge and understanding

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A. Mention principals of Taking consent.	Lecture and discussion	Oral &Written exam
B. Mention principals of Writing a death certificate	Lecture and discussion	Oral &Written exam
C. Mention principals of diagnosing death.	Lecture and discussion	Oral &Written exam
D. Mention principals of writing toxicological reports.	Lecture and discussion	Oral &Written exam
E. Explain principals of medical reports.	Lecture and discussion	Oral &Written exam
F. List indications and principals of induced emesis, gastric lavage and samples collection.	Lecture and discussion	Oral &Written exam

B. intellectual

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A. Present case , seminars in death certificate	Lecture and discussion	Oral &Written exam
B. Present case, seminars in toxicological cases	Lecture and discussion	Oral &Written exam

C. Practical skills

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A. Identify medical ethics and ethics in research.	Lecture and discussion	Reading Discussion
B. Prepare and write consent.	Lecture and discussion	Reading Discussion
C. Identify medical responsibilities.	Lecture and discussion	Reading Discussion
D. Write death certificate.	Lecture and discussion	Reading Discussion and active participation
E. Deal with a case of Suspicious death	Lecture and discussion	Reading Discussion and active participation
F. Perform gastric lavage, induce emesis, and obtain samples.		
G. Write medical and toxicological reports	Lecture and discussion	Reading Discussion and active participation

H. Develop and carry out patient management plans for Euthanaesia, and Organ Transplantation		
I. Counsel patients and their families about speciality related conditions including Permanent infirmities, Euthanasia, and Organ Transplantation		

D general skills

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A. Present a case.	Lecture and discussion	Global rating logbook
B. Write a consultation note	Lecture and discussion	Global rating logbook
C. Inform patients and maintaining comprehensive.	Lecture and discussion	Global rating logbook
D. Make timely and legible medical records	Lecture and discussion	Global rating logbook
E. Acquire the teamwork skills	Lecture and discussion	Global rating logbook

4. Course contents (topic s/modules/rotation Course Matrix

Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skills C	General Skills D
1. Death and death certificate.	B,C	A	D,E	A
2. Medical Reports	A		G	A,D,E
3. Toxicological reports	D,F	B	G,F	A,E
4. Ethics in research.	A		A	
5. Medical ethics.	E		A,B,C,H,I	B,C,E

5. Course Methods of teaching/learning:

1. Lectures.
2. Discussions.
3. Exercises.

6. Course assessment methods:

i. Assessment tools:

1. Written examination.
2. Attendance and active participation.
3. Oral examination.

ii. Time schedule: After 6 months from applying to the M D degree.

iii. Marks: 50 (35 for written exam and 15 for oral exam).

7. List of references

i. Lectures notes

- Course notes.
- Staff members print out of lectures and/or CD copies.

ii. Essential books

- Bernard Knight and Pekka Saukko (2015: Knight Forensic Pathology. Hodder Arnold press
- Goldfrank, Lewis R.; Howland, Mary Ann; Hoffman, Robert S.; Nelson, Ewis S.; Lewin, Neal A (2019): Goldfrank's Toxicologic Emergencies, 11th ed. McGraw Hill / Medical.
- Medical Ethics Manual. World medical association. Third edition 2015.
 - Medical ethics and law. Dominic Wilkinson, 3rd edition 2019.

iii. Recommended books

- Biswas Gautam (2021): Review of Forensic Medicine & Toxicology. 5th ed. Jaypee Brothers Medical Pub.

iv. Journal and web site

- Journals of all Egyptian Universities of Forensic Medicine and Clinical Toxicology.
- All International Journals of Forensic Medicine and Clinical Toxicology which available in the university network at www.sciencedirect.com. As :
Forensic Science International Journal.
Toxicology Letter.

8. Signatures

- Course Coordinator: Prof. Ghada Omran	- Head of the Department: Prof. Randa Hussein Abdel hady
Date: 17-4-2022	Date: 17-4-2022

Course 4-: Industrial chemistry.

- **Name of department: public health & community medicine**
- **Faculty of medicine**
- **Assiut University**
- **2022-2023**

I. Course data

+ Course Title: Industrial chemistry.

+ Course code: OCC309A§

+ Speciality: occupational and environmental medicine

+ Number of points: Didactic 2,.(66.7%) practical
1.(33.3%).total 3 CP(100%)

Department (s) delivering the course: public health department
conjunction with occupational and environmental medicine,
Faculty of Medicine, Cairo University.

+ Coordinator (s): according to both departmental councils.

Course coordinator:

- professor Dr:Ahmmed El Hany

Assistant coordinator (s) : Dr : Shimaa Abdelsamee

+ Date last reviewed: May 2022

+ Requirements (prerequisites) if any :

+ Completed Master degree in occupational and
environmental medicine.

+ Requirements from the students to achieve course ILOs are
clarified in the joining log book.

2. Course Aims

- 2/1- Demonstrate principles of Industrial process of each Upper Egypt factory.
- 2/2- Physician has knowledge of the health effects of the broad physical and social environment, which includes housing, urban development, land-use and transportation, industry, and agriculture.
- 2/3-Clinical evaluation and treatment for injuries and illnesses that are occupationally or environmentally related

3. Course intended learning outcomes (ILOs):

A-Knowledge and understanding

ILOs	Methods of teaching/ learning	<i>Methods of Evaluation</i>
<p>A. Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions related to industrial chemistry :</p> <p>- Clinical evaluation and treatment for injuries and illnesses that are occupationally or environmentally related.</p> <p>-Occurrence of factory disasters, outbreak epidemics.</p> <hr/> <p>- Industrial process Health hazards and preventive measures for :</p> <ul style="list-style-type: none"> ● Iron and steel industry ● Cement industry ● Textile industry ● Aluminum industry ● Fertilizer industry ● Sugar industry 	<p>Lectures Field visits to factories of upper Egypt Seminars Report writing</p>	<p>Written Oral practical</p>

<ul style="list-style-type: none"> ● Petroleum industry ● Glass industry ● Batteries industry ● Mining and Quarrying ● Paper and pulp industry ● Microelectronics industry ● Rubber industry ● Pharmaceutical industry ● Printing industry ● Motor vehicles and heavy equipment 		
<p>B. Mention the principles of (diagnostic/therapeutic/preventive tools) which are appropriate to occupational and environmental medicine in clinical reasoning, diagnosis and management of potential environmental causes of concern to the individual as well as to community health and Environmental issues</p>		
<p>C. Mention briefly state of art of the following rare diseases and conditions related to occupational and environmental medicine</p>		
<p>D. Explain the facts and principles of the relevant basic and clinically supportive sciences related to occupational and environmental medicine.</p>		
<p>D. explain the facts and principles of the relevant basic and clinically supportive sciences related to occupational and environmental medicine.</p>		
<p>E. Describe the basic ethical and medicolegal principles relevant to the occupational and environmental medicine.</p>		
<p>F. describe the basics of quality assurance to ensure good clinical care in his field</p>		
<p>G. Explain the ethical and scientific principles of medical research</p>		
<p>H. Explains the impact of common health problems in the field of industrial chemistry on the society.</p>		

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Design / present case in common problem related to industrial chemistry .	Lectures Field visits to factories of upper Egypt Seminars Report writing	Written Oral practical
B. Apply the basic and clinically supportive sciences which are appropriate to industrial chemistry related conditions / problem / topics.		
C. Demonstrate an investigatory and analytic thinking “problem – solving “approaches to clinical situation related to occupational and environmental medicine.		
D. Plan research projects.		
E. Write scientific papers.		
F. Lead risk management activities as a part of clinical governance.		
G. Plan quality improvement activities in the field of medical education and clinical practice in his speciality.		
H. Create / innovate plans, systems, and other issues for improvement of performance in his practice.		
I. Present and defend his / her data in front of a panel of experts		
J. Formulate management plans and alternative decisions in different situations in the field of the occupational and environmental medicine.		

C-Practical skills (Patient Care)

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Take history, examine and clinically diagnose different conditions related to occupational and environmental medicine.	Lectures Field visits to factories of upper Egypt	Written Oral practical
B. Order the following non invasive/invasive diagnostic procedures which are appropriate to industrial chemistry and principles of occupational medicine in clinical reasoning, diagnosis and management of potential environmental causes of concern to the individual as well as to community and occupational health and environmental issues.		
C. Interpret the following non invasive/invasive diagnostic procedures which are appropriate to industrial chemistry and principles of occupational medicine		
D. Perform the following non invasive/invasive diagnostic procedures which are appropriate to industrial chemistry and principles of occupational medicine		
E. Prescribe the following non invasive/invasive therapeutic procedures which are appropriate to industrial chemistry and principles of occupational medicine.		

<p>F. Perform the following non invasive/invasive therapeutic procedures which are appropriate to industrial chemistry and principles of occupational medicine.</p>		
<p>G. Develop and carry out patient management plans for the following problems related to industrial chemistry</p>		
<p>H. Counsel and educate patients and their family about industrial hazards and the prophylactic measures to avoid</p>		
<p>I. Use information technology to support patient care decisions and patient education for occupational and environmental medicine related conditions.</p>		
<p>J. Provide health care services aimed at preventing the following conditions Health hazards associated with different industries</p>		
<p>K. Work with health care professionals, including those from other disciplines, to provide patient-focused care.</p>		
<p>L. Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets.(Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records)</p>		

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Perform practice-based improvement activities using a systematic methodology in the common problems (plain and conduct audit cycles)	Lectures Field visits to factories of upper Egypt Seminars Report writing.	Written Oral Practical exam
B. Locate, appraises, and assimilates evidence from scientific studies related to patients' health problems.		
C. Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness		
D. Use information technology to manage information, access on-line medical information; and support their own education		
E. Lead the learning of students and other health care professionals.		

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
<p>F. Create and sustain a therapeutic and ethically sound relationship with patients</p>	<p>Lectures Field visits to factories of upper Egypt Seminars Report writing</p>	<p>Written Oral Practical exam</p>
<p>G. Perform the following oral communications: a member of a health care team or other professional group.</p>		
<p>H. Fill the following reports:</p> <ul style="list-style-type: none"> • Types of industries conducted in upper Egypt • Industrial process in Egypt • Industrial hazards (emission) <p>Safety measures of industrial process & precautions for each Industry.</p>		
<p>I. Work effectively with others as a member or leader of a health care team</p>		

Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
J-Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest.	-Observation & supervision -Didactic	1. Objective structured clinical examination 2. Patient survey
K-Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.		1. 360o global rating
L-Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
M-Work effectively in different health care delivery settings and systems.	Observation & supervision -Didactic	1. 360o global rating
N-Practice cost-effective health care and resource allocation that does not compromise quality of care		1. Check list evaluation of live or recorded performance
O-Advocate for quality patient care and assist patients in dealing with system complexities		1. 360o global rating 2. Patient survey
P-Partner with health care managers and health care providers to assess, coordinate, and improve health care and predict how these activities can affect system performance		

**4. Course contents (topic s/modules/rotation
Course Matrix**

Time Schedule: First Part/

Topic	Covered ILOs			
	Knowledge	Intellectual	Practical skills	General Skills
• Iron and steel industry	A-H	A-D	A-L	A-P
• Cement industry	A-H	A-D	A-L	A-P
• Textile industry	A-H	A-D	A-L	A-P
• Aluminum industry	A-H	A-D	A-L	A-P
• Fertilizer industry	A-H	A-D	A-L	A-P
• Sugar industry	A-H	A-D	A-L	A-P
• Petroleum industry	A-H	A-D	A-L	A-P
• Glass industry	A-H	A-D	A-L	A-P
• Batteries industry	A-H	A-D	A-L	A-P
• Mining and Quarrying	A-H	A-D	A-L	A-P
• Paper and pulp industry	A-H	A-D	A-L	A-P
• Microelectronics industry	A-H	A-D	A-L	A-P
• Rubber industry	A-H	A-D	A-L	A-P
• Pharmaceutical industry	A-H	A-D	A-L	A-P
• Printing industry	A-H	A-D	A-L	A-P
• Motor vehicles and heavy equipment	A-H	A-D	A-L	A-P

5. Course Methods of teaching/learning:

Field visits to factories of Upper Egypt
Seminars
Report writing

6. Course Methods of teaching/learning: for students with poor achievements

Lectures,
Field visits to factories of Upper Egypt,
Seminars;
Report writing.

7. Course assessment methods:

- i. **Assessment tools:** 1- Written and oral examination
2- Log book
- ii. **Time schedule:** 1 hour (lectures and practice) / week for 6 months
- iii. **Marks:** 150

8. List of references

i. Lectures notes

- Course notes
- Staff members print out of lectures and/or CD copies

ii. Essential book& recommended books

- **Joseph landau of occupational and environmental medicine 5th edition 2014.**

iii. Recommended books:

- **Bark 19th edition 2002.**
- **ROM 4th edition 1995.**
- **Oxford Handbook of Occupational Health 2007.**

- Textbook Of occupational Medicine Practice (Fourth Edition) 2017.

iv. Periodicals, Web sites,

1. Egyptian journal of Occupational and Environmental medicine
2. American journal of Occupational and Environmental medicine.

v. others

WHO,2019: available at

https://www.who.int/occupational_health/activities/occupational_work_diseases/en/

9. Signatures

Course Coordinator: - Prof. Ahmed M. Hany	Head of the Department: - Prof.dr. Eman Morsy
Date: 15/5/2022	Date: 15/5/2022

Course 5:- Human and Environmental physiology .

- *Name of department: public health and community medicine*
- *Faculty of medicine*
- *Assiut University*
- *2022-2023*

I. Course data

- + Course Title: **Environmental**, human physiology.
- + Course code: OCC309B
- + Speciality: occupational and environmental medicine
- + Number of points: Didactic3 (75%) practical1 (25%).total 4CP.
- + Department (s) delivering the course: public health department, Faculty of Medicine Assuit University in conjunction with occupational and environmental medicine, Faculty of Medicine, Cairo University.
- + Coordinator (s):According to both departmental councils.
- + Course coordinator:
professor Dr:Ahmmed Hany .
Assistant coordinator (s): Dr : shimaa abdelsamee
Date last reviewed: May 2022
Requirements (prerequisites) if any :
- + Completed Master degree in occupational and environmental medicine.
- + Requirements from the students to achieve course ILOs are clarified in the joining log book.

2. Course Aims

2/1- To acquire principles and skills which are appropriate for environmental and human physiology including the pulmonary function tests, hearing assessment, and measurement of environmental pollution.

3. Course intended learning outcomes (ILOs):

A-Knowledge and understanding

ILOs	Methods of teaching/ learning	<i>Methods of Evaluation</i>
<p>A. Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions:</p> <p>a- New trends in physiology related to occupational medicine.</p> <p>b- Pulmonary functions</p> <p>c- Tests of physical fitness and disability evaluation through cardiopulmonary examination</p> <p>d- Defense mechanisms</p> <p>e- Molecular mechanism of particle-induced lung disease</p> <p>f- Assessment of occupational hearing loss and disability evaluation</p>	<p>Lectures; tutorial; Seminars.</p>	<p>Written Oral Logbook.</p>
B. Mention the principles		

(diagnostic/therapeutic/preventive tools) related to human and environmental physiology such as; pulmonary function test ; hearing measurement, types of environmental pollution and assessment.-		
C. Mention briefly state of art of the following rare diseases and conditions related to human and environmental physiology such as; pulmonary function test ; hearing measurement, types of environmental pollution and assessment.		
D. Explain the facts and principles of the relevant basic and clinically supportive sciences related to human and environmental physiology		
D. explain the facts and principles of the relevant basic and clinically supportive sciences related to human and environmental physiology		
E. Describe the basic ethical and medicolegal principles relevant to the human and environmental physiology.		
F. describe the basics of quality assurance to ensure good clinical care in his field		
G. Explain the ethical and scientific principles of medical research		
H. Explains the impact of common health problems in the field of speciality on the society.		

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A-Design / present case in common problem related to occupational and environmental medicine.	Didactics, Lectures seminars	Written exam Oral exam Practical exam
B-Apply the basic and clinically supportive sciences which are appropriate to the speciality related conditions / problem / topics.		
C-Demonstrate an investigatory and analytic thinking “problem – solving “approaches to clinical situation related to occupational and environmental medicine.		
D-Plan research projects.		
E-Write scientific papers.		
F-Lead risk management activities as a part of clinical governance.		
G-Plan quality improvement activities in the field of medical education and clinical practice in his speciality.		
H-Create / innovate plans, systems, and other issues for improvement of performance in his practice.		
I-Present and defend his / her data in front of a panel of experts		
J-Formulate management plans and alternative decisions in different situations in the field of the occupational and environmental medicine.		

C-Practical skills (Patient Care)

	Methods of teaching/ learning	Methods of Evaluation
A-Take history, examine and clinically diagnose different conditions related to occupational and environmental medicine.	Practical training visits	Written, Oral & Practical exam
B-Order the following noninvasive/invasive diagnostic procedures <p style="margin-left: 40px;">Related to human and environmental physiology</p> <ul style="list-style-type: none"> • spirometry • Measurement of hearing level, audiometry. • Measurement of environmental pollution in different types, e.g. gougger counters for radiation). 		
C-Interpret the following noninvasive & invasive diagnostic procedures <p style="margin-left: 40px;">Related to human and environmental physiology</p>		
D-Perform the following non invasive&invasive diagnostic procedures <p style="margin-left: 40px;">Related to human and environmental physiology</p>		
E-Prescribe the following noninvasive & invasive therapeutic procedures Related to human and environmental physiology.		
F-Perform the following noninvasive /invasive therapeutic procedures Related to human and		

environmental physiology.		
G-Develop and carry out patient management plans for the following problems Related to human and environmental physiology		
H-Counsel and educate patients and their family about Main physical hazards they exposed to and ways to prevent their health effects		
I-Use information technology to support patient care decisions and patient education for occupational and environmental medicine related conditions.		
J-Provide health care services aimed at preventing the following conditions Health effects related to exposure to physical hazards		
K-Work with health care professionals, including those from other disciplines, to provide patient-focused care.		
L-Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets.(Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records)		

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A-Perform practice-based improvement activities using a systematic methodology in the common problems (plain and conduct audit cycles)	Observation and supervision , Educational prescriptions, conferences , written assignment	Written & Oral exam Logbook OSCE Portfolio
B-Locate, appraises, and assimilates evidence from scientific studies related to patients' health problems.		
C-Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness		
D-Use information technology to manage information, access on-line medical information; and support their own education		
E-Lead the learning of students and other health care professionals.		

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
F-Create and sustain a therapeutic and ethically sound relationship with patients	Observation and supervision , Educational prescriptions, conferences , written assignment	Written, Oral , Practical exam, Logbook, Portfolio.
G-Perform the following oral communications: member of a health care team or other professional group.		
H-Fill the following reports: Occupational related environmental pollution , occupational related hearing loss , occupational related respiratory dysfunction		
I-Work effectively with others as a member or leader of a health care team		

Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
J. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest.	Observation and supervision discussion	Portfolio Logbook Review report
K. Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.		
L. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
M. Work effectively in different health care delivery settings and systems.	Oral and written assignment Didactic , journal clubs, Educational prescription.	Written Oral Practical
N. Practice cost-effective health care and resource allocation that does not compromise quality of care		
O. Advocate for quality patient care and assist patients in dealing with system complexities		
P. Partner with health care managers and health care providers to assess, coordinate, and improve health care and predict how these activities can affect system performance		

4. Course contents (topic s/modules/rotation Course Matrix

Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge	Intellectual	Practical skills	General Skills
pulmonary function test and its significant	A-H	A-D	A-J	A-P
assessment of hearing level	A-H	A-D	A-I	A-P
types of environmental pollution	A-H	A-D	A-K	A-P

5. Course Methods of teaching/learning:

- Didactics; Lectures, tutorial; seminars.
- Practical training
- Visits
- Observation and supervision ,
- Educational prescriptions,
- conferences ,
- written assignment
- conferences ,
- written assignment
- Discussion
- Oral assignment

6. Course Methods of teaching/learning: for students with poor achievements

Extra;

- Didactics; Lectures, tutorial; seminars.
- Practical training
- Visits
- Observation and supervision ,
- Educational prescriptions,
- conferences ,
- written assignment
- conferences ,
- written assignment
- Discussion
- Oral assignment
- journal clubs,

7. Course assessment methods:

i. Assessment tools ;

Written and oral examination

Log book.

Practical exam

Portfolio

Review report.

Problem solving.

OSCE.

ii. Time schedule: 2 hour (lectures and practice) for each / week for 6 months

iii. Marks: 200

• 8. List of references

-
- **i. Lectures notes**
 - Course notes
 - Staff members print out of lectures and/or CD copies.
- ii. Essential book& recommended books:
 - Joseph landau of occupational and environmental medicine 5th edition2014.
 - Bark 19th Edition2002.
 - Rom 4th edition1995.
 - Oxford Handbook of Occupational Health 2007.
 - Textbook Of occupational Medicine Practice (Fourth Edition) 2017.
-
- iii. Periodicals, Web sites,
 - Egyptian journal of Occupational and Environmental medicine
 - American journal of Occupational and Environmental medicine.
- iv. others:
WHO,2019: available at
https://www.who.int/occupational_health/activities/occupational_work_diseases/en/

9. Signatures

Course Coordinator: - Prof. Ahmed M. Hany	Head of the Department: - Prof.dr. Eman Morsy
Date: 15/5/2022	Date: 15/5/2022

Second part

Course 6: *Occupational and Environmental Medicine (advanced)*

- *Name of department: public and community medicine*
- *Faculty of medicine*
- *Assiut University*
- **2022-2023**

I. Course data

- + Course Title: Advanced occupational Medicine and environmental Health
- + Course code: OCC309A
- + Speciality: occupational and environmental medicine
- + Number of points: Didactic22,(17%), practical107(83%),total 129 CP
- + Department (s) delivering the course: Public health and community medicine department in collaboration with other related depts. according to related modules, Faculty of Medicine Assiut University in conjunction with occupational and environmental medicine, Faculty of Medicine, Cairo University.
- + Coordinator (s): according to departmental councils.
- + Course coordinator: professor Dr: Ahmmed Hany
Assistant coordinator (s): Dr: Shimaa Abdesamee
- + Date last reviewed: May 2022
- + Requirements (prerequisites) if any :
- + Master degree of occupational and environmental medicine.
- + Requirements from the students to achieve course ILOs are clarified in the joining log book.

2. Course Aims

- 2/1. To be able to Prevent, identify, diagnose, treat and/or refer occupational/environmental lung disorders.
- 2/2- Evaluate and manage a patient with hearing loss or other occupationally related otologic conditions.
- 2/3. Differentiate occupational skin disorders by history, examination, and diagnostic evaluation.
- 2/4. Determine the nature and extent of potential occupational and environmental chemical exposures, considering routes of exposure and routes of absorption.
- 2/5. Use occupational and environmental information resources to conduct a literature search or to research the health effects of a chemical substance.
- 2/6. Interpret and apply the medical, toxicological, and environmental literatures.
- 2/7. To know Industrial process of each Upper Egypt factory
- 2/8. To know how to deal with factory disasters, outbreak epidemics.
- 2/9. To know Principles/details of pulmonary function test. Hearing assessment, measurement of environmental pollution.
- 2/10. Clinical evaluation and treatment for injuries and illnesses that are occupationally or environmentally related.
- 2/11. The physician has the knowledge and skills necessary to comply with regulations important to occupational and environmental health.

This course consists of 4 Units(modules)

1. **Occupational chest diseases.**
2. **Occupational audio logy.**
3. **Occupational dermatology**
4. **Clinical Toxicology**

Module	Principle coordinators	Assistant coordinatores
Module1:occupational chest diseases	professor Dr:Ahmmed Hany	Dr:Shimaa abdelsamee
Module2:occupational audio logy	professor Dr:Ahmmed Hany	Dr:Shimaa abdelsamee
Module3:occupational dermatology	professor Dr:Ahmmed Hany	Dr:Shimaa abdelsamee
Module4:Clinical toxicology	professor Dr:Ahmmed Hany	Dr:Shimaa abdelsamee

3. Course intended learning outcomes (ILOs):

Course6; Module1: Occupational Chest diseases

A-Knowledge and understanding

ILOs	Methods of teaching/ learning	<i>Methods of Evaluation</i>
<p>A. Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions:</p> <ul style="list-style-type: none"> - Defense mechanism -Occupational asthma and bronchoreactivity (e.g., toluene diisocyanate sensitization, exposure to inhaled allergens, byssinosis, reactive airways dysfunction syndrome [RADS]). - Pneumoconiosis (e.g., silicosis, coal workers' pneumoconiosis, asbestosis, hard-metal disease, benign radio-opaque pneumoconiosis, chronic beryllium disease). - Irritant inhalations (e.g., acids, alkalis, oxides of nitrogen, phosgene, phosphine). - Chronic obstructive pulmonary disease (COPD). - Hypersensitivity pneumonitis 	<p>Lectures Scientific library Seminars Web sites Case presentation</p>	<p>Oral exam Written exam Log book MCQ testing</p>
<p>B. Mention the principles of (diagnostic/therapeutic/preventive tools)</p> <ul style="list-style-type: none"> -Pulmonary function tests. <hr/> <ul style="list-style-type: none"> -Peak-flow testing and post-shift spirometry in the assessment of exposure-related bronchoreactivity - Post-bronchodilator pulmonary function testing in the assessment of bronchoreactivity. - Methacholine and specific challenge testing in the assessment of exposure-related bronchoreactivity. 		

<p>- Exercise disability tests in the assessment of pulmonary impairment.</p> <p>- Imaging studies (e.g., chest radiographs for assessment of the pneumoconiosis</p> <hr/> <p>, magnetic resonance imaging, computed tomography, plain tomography).</p> <p>- Allergy testing.</p>		
<p>C. Mention briefly state of art of the following rare diseases and conditions</p> <ul style="list-style-type: none"> • Mycotic lung diseases • Parasitic diseases of the lung and pulmonary esinophilia <hr/> <ul style="list-style-type: none"> • Respiratory cancer 	<p>Lectures Scientific library Seminars Web sites Case presentation</p>	<p>Oral exam Written exam Log book MCQ testing</p>
<p>D. Explain the facts and principles of the relevant basic and clinically supportive sciences related to occupational and environmental medicine</p>		
<p>D. explain the facts and principles of the relevant basic and clinically supportive sciences related to occupational and environmental medicine</p>		
<p>E. Describe the basic ethical and medicolegal principles revenant to the occupational and environmental medicine</p>		
<p>F. describe the basics of quality assurance to ensure good clinical care in his field</p>		
<p>G. Explain the ethical and scientific principles of medical research</p>		
<p>H. Explains the impact of common health problems in the field of speciality on the society.</p>		

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A-Design / present case in common problem related to occupational and environmental medicine AS IN AA	- Lectures Discussion	<ul style="list-style-type: none"> • Written exams • Oral exams
B-Apply the basic and clinically supportive sciences which are appropriate to the speciality related conditions / problem / topics.		
C-Demonstrate an investigatory and analytic thinking “problem – solving “approaches to clinical situation related to occupational and environmental medicine AS IN AA		
D-Plan research projects.		
E-Write scientific papers.		
F-Lead risk management activities as a part of clinical governance.		
G-Plan quality improvement activities in the field of medical education and clinical practice in his speciality.		
H-Create / innovate plans, systems, and other issues for improvement of performance in his practice.		
I-Present and defend his / her data in front of a panel of experts		
J. Formulate management plans and alternative decisions in different situations in the field of the occupational and environmental medicine.		

C-Practical skills (Patient Care)

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Take history, examine and clinically diagnose different conditions related to occupational and environmental medicine AS IN AA	Didactic; Lectures Clinical rounds Seminars Clinical rotations (service teaching)	Clinical examination -Chick list -log book & portfolio - - MCQ examination.
B. order the following non invasive& invasive diagnostic procedures e.g. <ul style="list-style-type: none"> • Pulmonary function tests. • Peak-flow testing and post-shift spirometry in the assessment of exposure-related bronchoreactivity • Post-bronchodilator pulmonary function testing in the assessment of bronchoreactivity. • Methacholine and specific challenge testing in the assessment of exposure-related bronchoreactivity. • Exercise disability tests in the assessment of pulmonary impairment. • Imaging studies (e.g., chest radiographs for assessment of the pneumoconiosis <hr/> <ul style="list-style-type: none"> • , magnetic resonance imaging, computed tomography, plain • tomography). • Allergy testing. 		
C. Interpret the following non invasive&invasive diagnostic procedures As mentioned above		
D. Perform the following non invasive/invasive diagnostic procedures As mentioned above		
E. Prescribe the following non invasive&invasive therapeutic procedures for chest diseases that are occupationally or environmentally related conditions.		
F. Perform the following non invasive&invasive therapeutic procedures for chest diseases that are occupationally or environmentally related conditions..		

<p>G. Develop and carry out patient management plans for the following problems for chest diseases that are occupationally or environmentally related conditions.</p>		
<p>H. Counsel and educate patients and their family about for chest diseases that are occupationally or environmentally related conditions.</p>		
<p>I. Use information technology to support patient care decisions and patient education for occupational and environmental medicinerelated conditions.</p>		
<p>J. Provide health care services aimed at preventing the following conditions chest diseases that are occupationally or environmentally related conditions.-</p>		
<p>K. Work with health care professionals, including those from other disciplines, to provide patient-focused care .</p>		
<p>L. Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets (Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records)</p>		

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A-Perform practice-based improvement activities using a systematic methodology in the common problems (plain and conduct audit cycles)	Lectures Scientific library Seminars Web sites Case presentation	Oral exam Written exam Log book MCQ testing
B-Locate, appraises, and assimilates evidence from scientific studies related to patients' health problems.		
C-Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness		
D-Use information technology to manage information, access on-line medical information; and support their own education		
E-Lead the learning of students and other health care professionals.		

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
F-Create and sustain a therapeutic and ethically sound relationship with patients	Lectures Scientific library Seminars Web sites Case presentation	Oral exam Written exam Log book MCQ testing
G-Perform the following oral communications: Factory manager , engineers , workers in factories		
H-Fill the following reports:Industrial process in each factory, hazards in each factory , safety measures		
I-Work effectively with others as a member or leader of a health care team e.g. in labor ward		

Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
J-Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest.	Lectures Scientific library Seminars Web sites Case presentation	1. Objective structured clinical examination 2. Patient survey
K-Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.		1. 360o global rating
L-Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
M-Work effectively in different health care delivery settings and systems.	Lectures Scientific library Seminars Web sites Case presentation	1. 360o global rating
N-Practice cost-effective health care and resource allocation that does not compromise quality of care		1. Check list evaluation of live or recorded performance
O-Advocate for quality patient care and assist patients in dealing with system complexities		1. 360o global rating 2. Patient survey
P-Partner with health care managers and health care providers to assess, coordinate, and improve health care and predict how these activities can affect system performance		

Course 6; Module2: Occupational audiology

3. Course intended learning outcomes (ILOs):

A-Knowledge and understanding

ILOs	Methods of teaching/ learning	<i>Methods of Evaluation</i>
<p>A. Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions:</p> <ol style="list-style-type: none"> 1. Evaluate and manage a patient with hearing loss or other occupationally related otologic conditions. 2. Identify, clinically manage, and prevent further injury to individuals with noise-induced hearing loss. 3. Perform and interpret an audiogram, identify a standard threshold shift, and implement appropriate treatment and preventive interventions. 	<p>Lectures Scientific library Seminars Web sites Case presentation</p>	<p>Oral exam Written exam Log book MCQ testing</p>
<p>B- Mention the principles of (diagnostic tools)</p> <ol style="list-style-type: none"> 1. hearing function tests 2. Other tests for assessment of hearing conditions which are occupationally related. 		
<p>C. Mention briefly state of art of the following rare diseases and conditions</p> <p>- nasopharyngeal conditions caused or aggravated by occupational and environmental exposure, including allergies, rhinitis, pharyngitis, vocal cord dysfunction, laryngeal polyps, and granulomata.</p>		
<p>D. Explain the facts and principles of the relevant basic and clinically supportive sciences related to occupational and environmental medicine AS in AA</p>		
<p>E. describe the basic ethical and medicolegal principles</p>		

relevant to occupational and environmental medicine AS in AA		
F. Describe the basics of quality assurance to ensure good clinical care in his field		
G. Explain the ethical and scientific principles of medical research		
H. Explain the impact of common health problems in the field of speciality on the society.		
I. Formulate management plans and alternative decisions in different situations in the field of Infectious diseases		

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A-Design / present case in common problem related to AS in AA	Lectures - Discussion	<ul style="list-style-type: none"> • Written exams • Oral exams
B-Apply the basic and clinically supportive sciences which are appropriate to the speciality related conditions / problem / topics.		
C-Demonstrate an investigatory and analytic thinking “problem – solving “approaches to clinical situation related to occupational and environmental medicine.		
D-Plan research projects.		
E-Write scientific papers.		
F-Lead risk management activities as a part of clinical governance.		
G-Plan quality improvement activities in the field of medical education and clinical practice in his speciality.		
H-Create / innovate plans, systems, and other issues for improvement of performance in his practice.		
I-Present and defend his / her data in front of a panel of experts		
J. Formulate management plans and alternative decisions in different situations in the field of the occupational and environmental medicine.		

C-Practical skills (Patient Care)

ILOs	Methods of teaching/ learning	Methods of Evaluation
<p>A-Take history, examine and clinically diagnose different conditions related to occupational and environmental medicine related to conditions AS mentioned in AA</p>	<p>Didactic; Lectures Clinical rounds Seminars Clinical rotations (service teaching)</p>	<p>-Clinical examination -Chick list -log book & portfolio - MCQ examination.</p>
<p>B-Order the following noninvasive /invasive diagnostic procedures 1.hearing function tests 2. Other tests for assessment of hearing conditions which are occupationally related.</p>		
<p>C-Interpret the following noninvasive /invasive diagnostic procedures 1.hearing function tests 2.Other tests for assessment of hearing conditions which are occupationally related</p>		
<p>D-Perform the following noninvasive /invasive diagnostic procedures 1.hearing function tests 2. Other tests for assessment of hearing conditions which are occupationally related.</p>		
<p>E-Prescribe the following noninvasive/invasive</p>		

<p>therapeutic procedures for hearing conditions which are occupationally or environmentally related to conditions AS mentioned in n AA..</p>		
<p>F-Perform the following noninvasive/invasive therapeutic procedures for hearing conditions which are occupationally or environmentally related to conditions as mentioned in AA..</p>		
<p>G-Develop and carry out patient management plans for the following problems Hearing conditions which are occupationally or environmentally related to conditions as mentioned in AA.</p>		
<p>H-Counsel and educate patients and their family about hearing conditions which are occupationally or environmentally related as mentioned in AA</p>		
<p>I-Use information technology to support patient care decisions and patient education for occupational and environmental medicine as mentioned in AA.</p>		
<p>J-Provide health care services aimed at preventing the following conditions Hearing conditions which are occupationally or environmentally related as mentioned in AA.</p>		
<p>K-Work with health care professionals, including those from other disciplines, to provide patient-focused care.</p>		
<p>L-Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets.(Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records)</p>		

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A-Perform practice-based improvement activities using a systematic methodology in the common problems (plain and conduct audit cycles)	Lectures Scientific library Seminars Web sites Case presentation	Oral exam Written exam Log book MCQ testing
B-Locate, appraises, and assimilates evidence from scientific studies related to patients' health problems.		
C-Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness		
D-Use information technology to manage information, access on-line medical information; and support their own education		
E-Lead the learning of students and other health care professionals.		

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
F-Create and sustain a therapeutic and ethically sound relationship with patients	Lectures Scientific library Seminars Web sites Case presentation	Oral exam Written exam Log book MCQ testing
G-Perform the following oral communications: Factory manager , engineers , workers in factories		
H-Fill the following reports: Industrial process in each factory, hazards in each factory , safety measures .		
I-Work effectively with others as a member or leader of a health care e.g. in labor ward team		

Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
J-Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest.	Lectures Scientific library Seminars Web sites Case presentation	1. Objective structured clinical examination 2. Patient survey
K-Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.		1. 360o global rating
L--Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
M-Work effectively in different health care delivery settings and systems.	Lectures Scientific library Seminars Web sites Case presentation	1. 360o global rating
N-Practice cost-effective health care and resource allocation that does not compromise quality of care		1. Check list evaluation of live or recorded performance
O-Advocate for quality patient care and assist patients in dealing with system complexities		1. 360o global rating 2. Patient survey
P-Partner with health care managers and health care providers to assess, coordinate, and improve health care and predict how these activities can affect system performance		

Course 6;Module3:Occupational Dermatology

3. Course intended learning outcomes (ILOs):

A-Knowledge and understanding

ILOs	Methods of teaching/ learning	<i>Methods of Evaluation</i>
<p>A. Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions:</p> <ol style="list-style-type: none"> 1. Diagnose and determine the cause of allergic contact dermatitis (including urticaria), particularly those caused by common antigens such as latex, epoxy monomer, and nickel. 2. Diagnose primary irritant-induced dermatoses. 3. Diagnose actinic skin damage, as well as photosensitization dermatitis, including cases due to exposure to coal tar, psoralens, and polychlorinated biphenyls (PCBs). 4. Diagnose occupational acne, including chloracne. 5. Differentiate work-aggravated dermatoses. 6. Diagnose occupational cutaneous infections (e.g., herpetic whitlows). 	<p>Didactic; Lectures Clinical rounds Seminars Clinical rotations (service teaching)</p>	<p>-Clinical examination -Chick list -log book & portfolio - MCQ examination.</p>
<p>B. mention the principles of (diagnostic tools& Tests for assessment of skin diseases which are occupationally or environmentally related.</p>		
<p>C. mention briefly state of art of the following rare diseases and conditions</p> <ol style="list-style-type: none"> 1. Identify skin neoplasias, especially as caused by 		

coal tar, ultraviolet radiation, or ionizing radiation. 2. Diagnose occupational pigmentary disorders, including vitiligo		
D. Explain the facts and principles of the relevant basic and clinically supportive sciences related to occupational and environmental medicine AS IN AA		
D. explain the facts and principles of the relevant basic and clinically supportive sciences related to occupational and environmental medicine AS IN AA		
E. Describe the basic ethical and medicolegal principles relevant to occupational and environmental medicine AS IN AA		
F. describe the basics of quality assurance to ensure good clinical care in his field		
G. Explain the ethical and scientific principles of medical research		
H. Explains the impact of common health problems in the field of speciality on the society.		

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A-Design / present case in common problem related to occupational and environmental medicine AS IN AA	Clinical rounds Seminars Clinical rotations (service teaching)	Clinical examination -Chick list -log book & portfolio
B-Apply the basic and clinically supportive sciences which are appropriate to the speciality related conditions / problem / topics.		
C-Demonstrate an investigatory and analytic thinking “problem – solving “approaches to clinical situation related to occupational and environmental medicine		
D-Plan research projects.		
E-Write scientific papers.		
F-Lead risk management activities as a part of clinical governance.		
G-Plan quality improvement activities in the field of medical education and clinical practice in his speciality.		
H-Create / innovate plans, systems, and other issues for improvement of performance in his practice.		
I-Present and defend his / her data in front of a panel of experts		
J. Formulate management plans and alternative decisions in different situations in the field of the occupational and environmental medicine.		

C-Practical skills (Patient Care)

ILOs	Methods of teaching/ learning	Methods of Evaluation
<p>A-Take history, examine and clinically diagnose different conditions related to occupational and environmental medicine</p>	<p>Clinical rounds Seminars Clinical rotations (service teaching)</p>	<p>Clinical examination -Chick list -log book & portfolio</p>
<p>B-Order the following noninvasive& invasive diagnostic procedures needed For assessment of skin diseases which are occupationally or environmentally related as mentioned in AA</p>		
<p>C-Interpret the following non invasive/invasive diagnostic procedures needed For assessment of skin diseases which are occupationally or environmentally related as mentioned in AA</p>		
<p>D-Perform the following non invasive/invasive diagnostic procedures needed For assessment of skin diseases which are occupationally or environmentally related as mentioned in AA</p>		
<p>E-Prescribe the following noninvasive &invasive therapeutic procedures needed For assessment of skin diseases which are occupationally or environmentally related as mentioned in AA.</p>		
<p>F-Perform the following noninvasive&invasive therapeutic procedures needed For assessment of skin diseases which are occupationally or environmentally related as mentioned in AA.</p>		

<p>G-Develop and carry out patient management plans for the following problems</p> <p style="padding-left: 40px;">Skin diseases which are occupationally or environmentally related as mentioned in AA.</p>		
<p>H-Counsel and educate patients and their family about skin diseases which are occupationally or environmentally related.</p>		
<p>I-Use information technology to support patient care decisions and patient education for occupational and environmental medicine related conditions as mentioned in AA.</p>		
<p>J-Provide health care services aimed at preventing the following conditions</p> <p style="padding-left: 40px;">The occupational dermatology related conditions as mentioned in AA.</p>		
<p>K-Work with health care professionals, including those from other disciplines, to provide patient-focused care.</p>		
<p>L-Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets.(Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records)</p>		

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A-Perform practice-based improvement activities using a systematic methodology in the common problems (plain and conduct audit cycles)	Clinical rounds Seminars Clinical rotations (service teaching)	Clinical examination -Chick list -log book & portfolio
B-Locate, appraises, and assimilates evidence from scientific studies related to patients' health problems.	senior staff discussion	
C-Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness		
D-Use information technology to manage information, access on-line medical information; and support their own education		
E-Lead the learning of students and other health care professionals.		

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
F-Create and sustain a therapeutic and ethically sound relationship with patients	Clinical rounds Seminars Clinical rotations (service teaching)	Clinical examination -Chick list -log book & portfolio
G-Perform the following oral communications: Factory manager , engineers , workers in factories		
H-Fill the following reports: Industrial process in each factory, hazards in each factory , safety measures		
I-Work effectively with others as a member or leader of a health care team e.g. in labor ward		

Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
J-Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest.	Clinical rounds Seminars Clinical rotations (service teaching)	1. Objective structured clinical examination 2. Patient survey
K-Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.	senior staff discussion	1. 360o global rating
L-Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
M-Work effectively in different health care delivery settings and systems.	Observation -Senior staff experience	1. 360o global rating
N-Practice cost-effective health care and resource allocation that does not compromise quality of care		1. Check list evaluation of live or recorded performance
O-Advocate for quality patient care and assist patients in dealing with system complexities		1. 360o global rating 2. Patient survey
P-Partner with health care managers and health care providers to assess, coordinate, and improve health care and predict how these activities can affect system performance		

COURSE 6; Module 4: Clinical toxicology-

3. Course intended learning outcomes (ILOs):

A-Knowledge and understanding

ILOs	Methods of teaching/ learning	<i>Methods of Evaluation</i>
<p>A. Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions:</p> <ul style="list-style-type: none"> • Hepatotoxicity • Hematotoxicity • Nephrotoxicity • Cardiovascular toxicity • Neurotoxicity • Toxic response to skin and mucous membranes • Reproductive toxicity 	<p>Lectures Scientific library Seminars Web sites Case presentation</p>	<p>Oral exam Written exam Log book MCQ testing</p>
<p>B. Mention the principles of (diagnostic/therapeutic/preventive tools) Assessment of toxicological exposure which is occupational or environmental related as in AA.</p>		
<p>C. Mention briefly state of art of the following rare diseases and conditions related to clinical toxicology</p> <ul style="list-style-type: none"> • Mutagenicity and genotoxicity • Immunotoxicity • Toxic and behavioral toxicology 		
<p>D. Explain the facts and principles of the relevant basic and clinically supportive sciences related to occupational and environmental medicine.</p>		

E. Describe the basic ethical and medico legal principles relevant to the occupational and environmental medicine.		
F. describe the basics of quality assurance to ensure good clinical care in his field		
G. Explain the ethical and scientific principles of medical research		
H. Explains the impact of common health problems in the field of speciality on the society.		

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A-Design / present case in common problem related to clinical toxicology as mentioned in AA	Lectures Discussion	<ul style="list-style-type: none"> • Written exams • Oral exams
B-Apply the basic and clinically supportive sciences which are appropriate to the speciality related conditions / problem / topics.		
C-Demonstrate an investigatory and analytic thinking “problem – solving “approaches to clinical situation related to occupational and environmental medicine.		
D-Plan research projects.		
E-Write scientific papers.		
F-Lead risk management activities as a part of clinical governance.		
G-Plan quality improvement activities in the field of medical education and clinical practice in his speciality.		
H-Create / innovate plans, systems, and other issues for improvement of performance in his practice.		
I-Present and defend his / her data in front of a panel of experts		
J. Formulate management plans and alternative decisions in different situations in the field of the occupational and environmental medicine .		

C-Practical skills (Patient Care)

ILO	Methods of teaching/ learning	Methods of Evaluation
<p>A-Take history, examine and clinically diagnose different conditions related to occupational and environmental medicine.</p>	<p>Didactic; Lectures Clinical rounds Seminars Clinical rotations (service teaching)</p>	<p>Chick list -log book & portfolio - MCQ examination</p>
<p>B-Order the following non invasive&invasive diagnostic procedures For Assessment of toxicological exposure which is occupational or environmental related.</p>		
<p>C-Interpret the following non invasive/invasive diagnostic procedures For Assessment of toxicological exposure which is occupational or environmental related.</p>		
<p>D-Perform the following non invasive/invasive diagnostic procedures For Assessment of toxicological exposure which is occupational or environmental related.</p>		
<p>E-Prescribe the following non invasive/invasive therapeutic procedures For Assessment of toxicological exposure which is occupational or environmental related..</p>		

<p>F-Perform the following non invasive/invasive therapeutic procedures For Assessment of toxicological exposure which is occupational or environmental related.</p>		
<p>G-Develop and carry out patient management plans for the following problems related to clinical toxicology as in AA.</p>		
<p>H-Counsel and educate patients and their family about Toxicological exposures which are occupational or environmental related their health hazards and How to avoid these hazards.</p>		
<p>I-Use information technology to support patient care decisions and patient education for occupational and environmental medicine related conditions.</p>		
<p>J-Provide health care services aimed at preventing the following conditions Toxicological exposure which is occupational or environmental related.</p>		
<p>K-Work with health care professionals, including those from other disciplines, to provide patient-focused care.</p>		
<p>L-Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets.(Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records)</p>		

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A-Perform practice-based improvement activities using a systematic methodology in the common problems (plain and conduct audit cycles)	Lectures Scientific library Seminars Web sites	Oral exam Written exam Log book MCQ testing
B-Locate, appraises, and assimilates evidence from scientific studies related to patients' health problems.		
C-Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness		
D-Use information technology to manage information, access on-line medical information; and support their own education		
E-Lead the learning of students and other health care professionals.		

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
F-Create and sustain a therapeutic and ethically sound relationship with patients	Lectures Scientific library Seminars Web sites	Oral exam Written exam Log book MCQ testing
G-Perform the following oral communications: Factory manager , engineers , workers in factories		
H-Fill the following reports: Industrial process in each factory, hazards in each factory , safety measures		
I-Work effectively with others as a member or leader of a health care team e.g. in labor ward		

Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
J-Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest.	Lectures Scientific library Seminars Web sites	1. Objective structured clinical examination 2. Patient survey
K-Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.		1. 360o global rating
L-Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
M-Work effectively in different health care delivery settings and systems.	Lectures Scientific library Seminars Web sites	1. 360o global rating
N-Practice cost-effective health care and resource allocation that does not compromise quality of care		1. Check list evaluation of live or recorded performance
O-Advocate for quality patient care and assist patients in dealing with system complexities		1. 360o global rating 2. Patient survey
P-Partner with health care managers and health care providers to assess, coordinate, and improve health care and predict how these activities can affect system performance		

**4. Course contents (topic s/modules/rotation
Course Matrix**

Time Schedule: Second part

Topic	Covered ILOs			
	Knowledge	Intellectual	Practical skill	General Skills
Module1	Occupational chest diseases			
• Defense mechanism	A,H	D,E,F,G,I	-	A-P
• Molecular mechanisms of particle-induced lung disease	A,H	D,E,F,G,I	-	A-P
• Lung function examination	A&B&D,E,H,I	A-I	A-L	A-P
• Chest radiology for assessment of pneumoconiosis	A,B,D,E,H,I	D-I	A-L	A-P
• Diseases caused by respiratory irritants and toxic chemicals	A,B,D-I	A-I	A-L	A-P
• Pneumoconiosis	A,B,D-I	A-I	A-L	A-P
• Occupational asthma	A,B,D-I	A-I	A-L	A-P
• Extrinsic allergic alveolitis	A,B,D-I	A-I	A-L	A-P
• Mycotic lung diseases	A-I	A-I	A-L	A-P
• Pulmonary infections	A,B,D-I	A-I	A-L	A-P
• COPD	A,B,D-I	A-I	A-L	
• Respiratory cancer	A-I	A-I	A-L	A-P
• Inert dust	A,H	D,E,F,G,I	-----	A-P
• Hard metal disease	A,H	A-I	-----	A-P
• Man made –mineral fibers	A,H	D,E,F,G,I	-----	A-P

Module 2 Occupational Audiology diseases				
hearing loss or other occupationally related otologic conditions.	A,B,D-I	A-I	A-L	A-P
manage, and prevent further injury to individuals with noise-induced hearing loss.	A,B,D-I	A-I	A-L	A-P
Perform and interpret an audiogram, identify a standard threshold shift, and implement appropriate treatment and preventive interventions.	A&B&D,E,H ,I	A-I	A-L	A-P
nasopharyngeal conditions caused or aggravated by occupational and environmental exposure, including allergies, rhinitis, pharyngitis, vocal cord dysfunction, laryngeal polyps, and granulomata.	A-I	A-I	A-L	A-P
Module 3 occupational dermatology diseases				
allergic contact dermatitis (including urticaria), particularly those caused by common antigens such as latex, epoxy monomer, and nickel.	A,B,D-I	A-I	A-L	A-P
primary irritant-induced dermatoses.	A,B,D-I	A-I	A-L	A-P
. actinic skin damage, as well as photosensitization dermatitis, including cases due to exposure	A,B,D-I	A-I	A-L	A-P

to coal tar, psoralens, and polychlorinated biphenyls (PCBs).				
occupational acne, including chloracne.	A,B,D-I	A-I	A-L	A-P
.work-aggravated dermatoses.	A,B,D-I	A-I	A-L	A-P
skin neoplasias, especially as caused by coal tar, ultraviolet radiation, or ionizing radiation.	A-I	A-I	A-L	A-P
occupational pigmentary disorders, including vitiligo	A-I	A-I	A-L	A-P
Module 4 Occupational clinical toxicology				
Hepatotoxicity	A,B,D-I	A-I	A-L	A-P
Hematotoxicity	A,B,D-I	A-I	A-L	A-P
Nephrotoxicity	A,B,D-I	A-I	A-L	A-P
Cardiovascular toxicity	A,B,D-I	A-I	A-L	A-P
Neurotoxicity	A,B,D-I	A-I	A-L	A-P
Toxic response to skin and mucous membranes	A,H	D,E,F,G,I	A-L	A-P
Reproductive toxicity	A,B,D-I	A-I		A-P
Mutagenicity and genotoxicity	A-I	A-I	A-L	A-P
Immunotoxicity	A-I	A-I	A-L	A-P
Toxic and behavioral toxicology	A-I	A-I	A-L	A-P

5. Course Methods of teaching/learning:

1. Lectures
2. Clinical training (inpatient & outpatients)
3. Field visit.
4. Report discussion
5. Discussion with senior staff discussion.
6. outpatient clinic.
7. seminars
8. Tutorial

6. Course Methods of teaching/learning: for students with poor achievements

- Extra number:
- Lectures
- Clinical training (inpatient & outpatients)
- Field visit.
- Report discussion
- Discussion with senior staff discussion.
- outpatient clinic.
- seminars
- Tutorial

7. Course assessment methods:

- i. Assessment tools:**
 1. Written exam.
 2. oral exam
 3. Log book
 4. reports.
- ii. Time schedule: at the second part.**
- iii. Marks: 1100 marks.**

8. List of references

i. Lectures notes

- Course notes
- Staff members print out of lectures and/or CD copies

ii. Essential books

- **Joseph ladou of occupational and environmental medicine 5th edition 2014.**

- **Oxford Handbook of Occupational Health 2007.**

- **Textbook Of occupational Medicine Practice (Fourth Edition) 2017.**

- **iii. Recommended books**

- 1. Bark Edition 19th edition 2002**

- 2. ROM 4th edition 1995**

iv. Periodicals, Web sites, ... etc

- 1. Egyptian journal of Occupational and Environmental medicine**

- 2. American journal of Occupational and Environmental medicine.**

v. Others

WHO,2019: available at

https://www.who.int/occupational_health/activities/occupational_work_diseases/en/

9. Signatures

Course Coordinator: - Prof. Ahmed M. Hany	Head of the Department: - Prof.dr. Eman Morsy
Date: 15/5/2022	Date: 15/5/2022

Course 7: Internal medicine

- **Name of department: public and community medicine department**
- **Faculty of medicine**
- **Assiut University**
- **2022-2023**

I. Course data

- 1- **Course Title: Internal medicine.**
- 2- **Course code: OCC318**
- 3- **Speciality: occupational and environmental medicine**
Number of points: Didactic2 (11%) practical16 (89%).total 18
- 4- **Department (s) delivering the course: public health department in collaboration with internal medicine department**
- 5- **Coordinator (s):**
 - 1- **Course coordinator: professor Dr:Ahmmed Hany .**
 - 2- **Assistant coordinator (s) :Dr : shimaa abdelsamee**
- 6- **Date last reviewed: May 2022**
- 7- **Requirements (prerequisites) if any :**
Completed Master degree in occupational and environmental medicine.
Requirements from the students to achieve course ILOs are clarified in the joining log book.

2. Course Aims

2/1-Outline principles of internal medicine which help in assessment of diseases which are occupationally or environmentally related

3. Course intended learning outcomes (ILOs):

A-Knowledge and understanding

ILOs	Methods of teaching/ learning	<i>Methods of Evaluation</i>
<p>A. Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions:</p> <ul style="list-style-type: none"> - Haematology <ul style="list-style-type: none"> a-Malignant Lymphomas , leukemia and multiple myeloma b- Agents or work conditions affecting the blood -Hepatology &Gastroenterology <ul style="list-style-type: none"> a-Agents or work conditions affecting the liver and GIT -Collagen vascular and systemic diseases <ul style="list-style-type: none"> a- Rheumatoid arthritis b- Systemic Lupus nephrology <ul style="list-style-type: none"> a-agents at the work place b-environmental nephrotoxic agents others <ul style="list-style-type: none"> a-determination of fitness at work disability ,rehabilitation and workers compensation law in conditions related to occupational and work related diseases. b- first aid and emergency services 	<p>Lectures Scientific library Seminars Web sites Case presentation</p>	<p>Oral exam Written exam Log book MCQ testing</p>

<p>B. Mention the principles (diagnostic/therapeutic/preventive tools) related to internal medicine such as;</p> <ol style="list-style-type: none"> 1. how to do general examination 2. how to do cardiac and abdominal and neurological examination 3. to know principles of ECG 		
<p>C. Mention briefly state of art of the following rare diseases and conditions related to internal medicine</p>		
<p>D. Explain the facts and principles of the relevant basic and clinically supportive sciences related to occupational and environmental medicine .</p>		
<p>D. explain the facts and principles of the relevant basic and clinically supportive sciences related to occupational and environmental medicine.</p>		
<p>E. Describe the basic ethical and medicolegal principles relevant to occupational and environmental medicine .</p>		
<p>F. describe the basics of quality assurance to ensure good clinical care in his field</p>		
<p>G. Explain the ethical and scientific principles of medical research</p>		
<p>H. Explains the impact of common health problems in the field of speciality on the society.</p>		

B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A-Design / present case in common problem related to internal medicine as mentioned in AA	-Clinical rounds -Senior staff experience	-Procedure and case presentation -Log book & Portfolio
B-Apply the basic and clinically supportive sciences which are appropriate to the speciality related conditions / problem / topics.		
C-Demonstrate an investigatory and analytic thinking “problem – solving “approaches to clinical situation related to occupational and environmental medicine .		
D-Plan research projects.		
E-Write scientific papers.		
F-Lead risk management activities as a part of clinical governance.		
G-Plan quality improvement activities in the field of medical education and clinical practice in his speciality.		
H-Create / innovate plans, systems, and other issues for improvement of performance in his practice.		
I-Present and defend his / her data in front of a panel of experts		
J. Formulate management plans and alternative decisions in different situations in the field of the occupational and environmental medicine.		

C-Practical skills (Patient Care)

ILOs	Methods of teaching/ learning	Methods of Evaluation
<p>A-Take history, examine and clinically diagnose different conditions related to occupational and environmental medicine</p>	<p>Didactic; Lectures Clinical rounds Seminars Clinical rotations (service teaching)</p>	<p>-Clinical examination -Chick list -log book & portfolio - - MCQ Examination</p>
<p>B-Order the following non invasive/invasive diagnostic procedures</p> <p>Related to occupational and environmental medicine</p> <ul style="list-style-type: none"> • x-rays • ultrasonography • CBC <hr/> <ul style="list-style-type: none"> • Liver function and kidney function tests 		
<p>C-Interpret the following non invasive/invasive diagnostic procedures</p> <p>Related to occupational and environmental medicine</p> <ul style="list-style-type: none"> • Routine appropriate Lab investigations related to occupational& environmental medicine. • X ray . • ultrasonography • CBC • Liver function and kidney function tests 		

<p>D-Perform the following non invasive/invasive diagnostic procedures</p> <p>Related to occupational and environmental medicine</p> <ul style="list-style-type: none"> ● Routine appropriate Lab investigations related to occupational& environmental medicine. ● X ray . ● ultrasonography ● CBC ● Liver function and kidney function tests 		
<p>E-Prescribe the following non invasive/invasive therapeutic procedures Related to occupational and environmental medicine</p> <ul style="list-style-type: none"> ● Routine appropriate Lab investigations related to occupational& environmental medicine. ● X ray . ● ultrasonography ● CBC ● Liver function and kidney function tests 		
<p>F-Perform the following non invasive/invasive therapeutic procedures Related to occupational and environmental medicine</p> <ul style="list-style-type: none"> ● Routine appropriate Lab investigations related to occupational& environmental medicine. ● X ray . ● ultrasonography ● CBC ● Liver function and kidney function tests 		

<p>G-Develop and carry out patient management plans for the following problems As mentioned in AA</p>		
<p>H-Counsel and educate patients and their family about About conditions mentioned in AA</p>		
<p>I-Use information technology to support patient care decisions and patient education for the occupational and environmental medicine related conditions</p>		
<p>J-Provide health care services aimed at preventing the following conditions Mentioned in AA</p>		
<p>K-Work with health care professionals, including those from other disciplines, to provide patient-focused care.</p>		
<p>L-Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets.(Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records)</p>		

D-General Skills

Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A-Perform practice-based improvement activities using a systematic methodology in the common problems (plain and conduct audit cycles)	-Simulations -Clinical round -Seminars -Lectures -Case presentation	Written & Oral exam Logbook OSCE Portfolio
B-Locate, appraises, and assimilates evidence from scientific studies related to patients' health problems.	-Simulations -Clinical round -Seminars -Lectures -Case presentation	
C-Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness		
D-Use information technology to manage information, access on-line medical information; and support their own education		
E-Lead the learning of students and other health care professionals.		

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
F-Create and sustain a therapeutic and ethically sound relationship with patients	-Simulations -Clinical round -Seminars -Lectures -Case presentation	Written, Oral , Practical exam, Logbook, Portfolio.
G-Perform the following oral communications: member of a health care team or other professional group.		
H-Fill the following reports: <ul style="list-style-type: none"> • Patients' medical reports • Death report • ultrasonography reports 		
I-Work effectively with others as a member or leader of a health care team		

Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
J-Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest.	<ul style="list-style-type: none"> - Observation - Senior staff experience - Case taking 	Portfolio Logbook Review report
K-Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.		
L-Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
M-Work effectively in different health care delivery settings and systems.	Observation <ul style="list-style-type: none"> - Senior staff experience 	Written Oral Practical
N-Practice cost-effective health care and resource allocation that does not compromise quality of care		
O-Advocate for quality patient care and assist patients in dealing with system complexities		
P-Partner with health care managers and health care providers to assess, coordinate, and improve health care and predict how these activities can affect system performance		

4. Course contents (topic s/modules/rotation Course Matrix

Time Schedule: Second part

Topic	Covered ILOs			
	Knowledge	Intellectual	Practical skills	General Skills
Principles of internal medicine which help in assessment of diseases which are occupationally or environmentally related	A-I	A-I	A-L	A-P

5. Course Methods of teaching/learning:

- Didactics; Lectures, tutorial; seminars.
- Practical training
- Visits
- Observation and supervision ,
- Educational prescriptions,
- conferences ,
- written assignment
- conferences ,
- written assignment
- Discussion
- Oral assignment

6. Course Methods of teaching/learning: for students with poor achievements

Extra;

- Didactics; Lectures, tutorial; seminars.
- Practical training
- Visits
- Observation and supervision ,
- Educational prescriptions,
- conferences ,
- written assignment
- conferences ,
- written assignment
- Discussion
- Oral assignment
- journal clubs,

7. Course assessment methods:

- i. Assessment tools ;
 - Written and oral examination
 - Log book.
 - Practical exam
 - Portfolio
 - Review report.
 - Problem solving.
 - OSCE.
- ii. Time schedule: at the second part
- iii. Marks: 100

8. List of references

i. Lectures notes

- Course notes
- Staff members print out of lectures and/or CD copies

ii. Essential books

- Joseph Iadov of occupational and environmental medicine 5th edition 2014.
- Oxford Handbook of Occupational Health 2007.
- Textbook Of occupational Medicine Practice (Fourth Edition) 2017.

iii. Recommended books

3. Bark Edition 19th edition 2002
4. ROM 4th edition 1995

iv. Periodicals, Web sites, ... etc

3. Egyptian journal of Occupational and Environmental medicine
4. American journal of Occupational and Environmental medicine.

v. Others

WHO,2019: available at [https://
www.who.int/occupational_health/activities/occupational_wor
k_diseases/en/](https://www.who.int/occupational_health/activities/occupational_work_diseases/en/)

9. Signatures

Course Coordinator: - Prof. Ahmed M. Hany	Head of the Department: - Prof.dr. Eman Morsy
Date: 15/5/2022	Date: 15/5/2022

ANNEX 2

Program Academic Reference Standards (ARS)

1- Graduate attributes for medical doctorate of Occupational and Environmental Medicine

The Graduate (after residence training and medical doctorate years of study) must:

- 1-** Demonstrate competency and mastery of basics, methods and tools of scientific research and clinical audit in the chosen field of medicine.
- 2-** Have continuous ability to add knowledge to the occupational and environmental medicine through research and publication.
- 3-** Appraise and utilise relevant scientific knowledge to continuously update and improve clinical practice.
- 4-** Acquire excellent level of medical knowledge in the basic biomedical, behavioural and clinical sciences, medical ethics and medical jurisprudence and apply such knowledge in patient care and scientific research.
- 5-** Function as a leader of a team to provide patient care that is appropriate, effective and compassionate for dealing with health problems and health promotion.
- 6-** Identify and create solutions for health problems in his speciality.
- 8-** Acquire an in depth understanding of common areas of occupational and environmental medicine from basic clinical care to evidence based clinical application, and possession of required skills to manage independently all problems in these areas.

- 8-** Demonstrate leadership competencies including interpersonal and communication skills that ensure effective information exchange with individual patients and their families and teamwork with other health professions, the scientific community and the public.
- 9-** Function as teacher in relation to colleagues, medical students and other health professions.
- 10-** Master decision making capabilities in different situations related to his field of practice.
- 11-** Show leadership responsiveness to the larger context of the health care system, including e.g. the organisation of health care, partnership with health care providers and managers, practice of cost-effective health care, health economics, and resource allocations.
- 12-** Demonstrate in depth awareness of public health and health policy issues including independent ability to improve health care, and identify and carryout system-based improvement of care.
- 13-** Show model attitudes and professionalism.
- 14-** Demonstrate commitment for lifelong learning and maintenance of competence and ability for continuous medical education and learning in subsequent stages and in the occupational and environmental medicine or one of its subspecialties.
- 15-** Use recent technologies to improve his practice in the occupational and environmental medicine field.
- 16-** Share in updating and improving clinical practice in the occupational and environmental medicine field.

2- Competency based Standards for medical doctorate

2.1- Knowledge and understanding

By the end of the program, the graduate should demonstrate satisfactory knowledge and understanding of

2-1-A- Established, updated and evidence- based theories, basics and developments of occupational and environmental medicine and relevant sciences.

2-1-B- Basics, methods and ethics of medical research.

2-1-C- Ethical and medicological principles of medical practice related to occupational and environmental medicine field.

2-1-D- Principles and measurements of quality in the occupational and environmental medicine field.

2-1-E- Principles and efforts for maintainance and improvements of public health.

2- Intellectual skills

By the end of the program, the graduate should be able to demonstrate the following

2-2-A- Application of basic and other relevant science to solve speciality related Problems.

2-2-B- Problem solving based on available data.

2-2-C- Involvement in research studies related to the occupational and environmental medicine.

2-2-D- Writing scientific papers.

2-2-E- Risk evaluation in the related clinical practice.

2-2-F- Planning for performance improvement in the occupational and environmental medicine field.

2-2-G- Creation and innovation in the occupational and environmental medicine field.

2-2-H- Evidence – based discussion.

2-2-I- Decision making in different situations related to the occupational and environmental medicine fields.

2.3- Clinical skills

By the end of the program, the graduate should be able to

+ Competency-based outcomes for Patient Care:-

2-3-A- MD students must be able to provide extensive level of patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health extensive level means in depth understanding and from basic science to evidence – based clinical application and possession of skills to manage independently all problems in his field of practice.

2-3-B- Master patient care skills relevant to that occupational and environmental medicine for patients with all diagnoses and procedures.

2-3-C- Write and evaluate reports for situations related to the field of occupational and environmental medicine.

2.4- General skills

By the end of the program, the graduate should be able to

+ Competency-based outcomes for Practice-based Learning and Improvement

2-4-A- Master practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management

2-4-B- Use competently all information sources and technology to improve his practice.

2-4-C- Master skills of teaching and evaluating others.

+ Competency-based objectives for Interpersonal and Communication Skills

2-4-D- Master interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and other health professionals.

 **Competency-based objectives for Professionalism**

2-4-E- Master Professionalism behavior, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

 **Competency-based objectives for Systems-based Practice:**

2-4-F- Demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively use system resources to provide care that is of optimal value.

2-4-G- Participate in improvement of the education system.

2-4-H- Demonstrate skills of leading scientific meetings including time management

2-4-O- Demonstrate skills of self and continuous learning.

Annex 3, Methods of teaching/learning

Annex 3, Methods of teaching/learning

	Patient care	Medical knowledge	Practice-based learning/Improvement	Interpersonal and communication skills	Professionalism	Systems-based practice
Didactic (lectures, seminars, tutorial)	X	X		X	X	X
journal club,	X	X	X			
Educational prescription	X	X	X	X	X	X
Present a case (true or simulated) in a grand round	X	X	X	X	X	
Observation and supervision	X		X	X	X	X
conferences		X	X	X		X
Written assignments	X	X	X	X	X	X
Oral assignments	X	X	X	X	X	X

Teaching methods for knowledge

- ❖ Didactic (lectures, seminars, tutorial)
- ❖ journal club
- ❖ Critically appraised topic
- ❖ Educational prescription (a structured technique for following up on clinical questions that arise during rounds and other venues).
- ❖ Present a case (true or simulated) in a grand round
- ❖ Others

Teaching methods for patient care

- ❖ Observation and supervision /Completed tasks procedure/case logs
- ❖ On-the-job” training without structured teaching is not sufficient for this skill (checklists).
- ❖ Simulation is increasingly used as an effective method for skill/ teamwork training.

Teaching methods for other skills

- ❖ Written communication (e.g., orders, progress note, transfer note, discharge summary, operative reports, and diagnostic reports).
- ❖ Oral communication (e.g., presentations, transfer of care, interactions with patients, families, colleagues, members of the health care team) and/or non verbal skills (e.g., listening, team skills)
- ❖ Professionalism, including medical ethics, may be included as a theme throughout the program curriculum that includes both didactic and experiential components (e.g., may be integrated into already existing small group discussions of vignettes or case studies and role plays, computer-based modules) and may be modeled by the faculty in clinical practice and discussed with the resident as issues arise during their clinical practice.

Annex 4, Assessment methods

Annex 4, ILOs evaluation methods for MD students.

Method	Practical skills	K	Intellectual	General skills			
	Patient care	K	I	Practice-based learning/Improvement	Interpersonal and communication skills	Professionalism	Systems-based practice
Record review	X	X	X		X	X	X
Checklist	X				X		
Global rating	X	X	X	X	X	X	X
Simulations	X	X	X	X	X	X	
Portfolios	X	X	X	X	X		
Standardized oral examination	X	X	X	X	X		X
Written examination	X	X	X	X			X
Procedure/case log	X	X					
OSCE	X	X	X	X	X	X	X

Annex 4, Glossary of MD students assessment methods

- ❖ Record Review – Abstraction of information from patient records, such as medications or tests ordered and comparison of findings against accepted patient care standards.
- ❖ Chart Stimulated Recall – Uses the MD doctor’s patient records in an oral examination to assess clinical decision-making.
- ❖ Mini clinical evaluation: Evaluation of Live/Recorded Performance (single event) – A single resident interaction with a patient is evaluated using a checklist. The encounter may be videotaped for later evaluation.
- ❖ Standardized Patients (SP) – Simulated patients are trained to respond in a manner similar to real patients. The standardized patient can be trained to rate MD doctor’s performance on checklists and provide feedback for history taking, physical examination, and communication skills. Physicians may also rate the MD doctor’s performance.
- ❖ Objective Structured Clinical Examination (OSCE) – A series of stations with standardized tasks for the MD doctors to perform. Standardized patients and other assessment methods often are combined in an OSCE. An observer or the standardized patient may evaluate the MD doctors.
- ❖ Procedure or Case Logs – MD doctors prepare summaries of clinical experiences including clinical data. Logs are useful to document educational experiences and deficiencies.
- ❖ PSQs – Patients fill out Patient Survey questionnaires (PSQs) evaluating the quality of care provided by MD doctors.
- ❖ Case /problems – assess use of knowledge in diagnosing or treating patients or evaluate procedural skills.
- ❖ Models: are simulations using mannequins or various anatomic structures to assess procedural skills and interpret clinical findings.

Both are useful to assess practice performance and provide constructive feedback.

- ❖ 360 Global Rating Evaluations – MD doctors, faculty, nurses, clerks, and other clinical staff evaluate MD doctors from different perspectives using similar rating forms.

- ❖ Portfolios – A portfolio is a set of project reports that are prepared by the MD doctors to document projects completed during the MD study years. For each type of project standards of performance are set. Example projects are summarizing the research literature for selecting a treatment option, implementing a quality improvement program, revising a medical student clerkship elective, and creating a computer program to track patient care and outcomes.

- ❖ Examination MCQ – A standardized examination using multiple-choice questions (MCQ). The in-training examination and written board examinations are examples.

- ❖ Examination Oral – Uses structured realistic cases and patient case protocols in an oral examination to assess clinical decision-making.

- ❖ Procedure or Case Logs – MD doctors prepare summaries of clinical experiences including clinical data. Logs are useful to document educational experiences and deficiencies.

- ❖ PSQs – Patients fill out Patient Survey questionnaires (PSQs) evaluating the quality of care provided by MD doctors.

Annex 5, Program evaluation tools

By whom	Method	sample
Quality Assurance Unit	Reports Field visits	#
External Evaluator (s):According to department council External Examiner (s): According to department council	Reports Field visits	#
Stakeholders	Reports Field visits Questionnaires	#
Senior students	Questionnaires	#
Alumni	Questionnaires	#

Annex 6, Program Correlations:

مصفوفة توافق المعايير القومية القياسية العامة لبرامج الدكتوراة مع المعايير الأكاديمية المعتمدة من كلية الطب □ جامعة أسيوط لدرجة الدكتوراة في الطب المهني والبيئي

I- General Academic Reference Standards (GARS) versus Program ARS

1- Graduate attributes

Faculty ARS	NAQAAE General ARS for postgraduate Programs
1- Demonstrate competency and mastery of basics, methods and tools of scientific research and clinical audit in occupational and environmental medicine.	1- إتقان أساسيات و منهجيات البحث العلمي
2- Have continuous ability to add knowledge new developments to occupational and environmental medicine through research and publication.	2- العمل المستمر علي الإضافة للمعارف في مجال التخصص
3- Appraise and utilise scientific knowledge to continuously update and improve clinical practice and relevant basic sciences.	3- تطبيق المنهج التحليلي والناقد للمعارف في مجال التخصص و المجالات ذات العلاقة
4- Acquire excellent level of medical knowledge in the basic biomedical, clinical, behavioural and clinical sciences, medical ethics and medical jurisprudence and apply such knowledge in patient care and scientific	4- دمج المعارف المتخصصة مع المعارف ذات العلاقة مستتباً و مطوراً للعلاقات البينية بينها
5- Function as a leader of a team to provide patient care that is appropriate, compassionate for dealing effective and with health Problems and health promotion. 7- Acquire an in depth understanding of common areas of speciality, from basic clinical care to evidence based clinical application, and possession of skills to manage independently all problems in these areas.	5- إظهار وعيا عميقا بالمشاكل الجارية و النظريات الحديثة في مجال التخصص
6- Identify and create solutions for health	6- تحديد المشكلات المهنية و إيجاد حلولاً

problems in occupational and environmental medicine.	مبتكرة لحلها
5- Function as a leader of a team to provide patient care that is appropriate, effective and compassionate for dealing with health problems and health promotion. 7- Acquire an in depth understanding of common areas of occupational and environmental medicine, from basic clinical care to evidence based clinical application, and possession of skills to manage independently all problems in these areas.	7- إتقان نطاقا واسعا من المهارات المهنية في مجال التخصص
16- Share in updating and improving clinical practice in occupational and environmental medicine. 9- Function as teacher in relation to colleagues, medical students and other health professions.	8- التوجه نحو تطوير طرق و أدوات و أساليب جديدة للمزاولة المهنية
15- Use recent technologies to improve his practice in occupational and environmental medicine.	9- استخدام الوسائل التكنولوجية المناسبة بما يخدم ممارسته المهنية
8- Demonstrate leadership competencies including interpersonal and communication skills that ensure effective information exchange with individual patients and their families and teamwork with other health professions, the scientific community and the public. 5- Function as a leader of a team to provide patient care that is appropriate, effective and compassionate for dealing with health problems and health promotion.	10- التواصل بفاعلية و قيادة فريق عمل في سياقات مهنية مختلفة
10- Master decision making capabilities in different situations related to occupational and environmental medicine.	11- اتخاذ القرار في ظل المعلومات المتاحة

<p>11- Show leadership responsiveness to the larger context of the health care system, including e.g. the organisation of health care, partnership with health care providers and managers, practice of cost-effective health care, health economics, and resource allocations.</p>	<p>12-توظيف الموارد المتاحة بكفاءة و تنميتها والعمل على إيجاد موارد جديدة</p>
<p>12- Demonstrate in depth awareness of public health and health policy issues including independent ability to improve health care, and identify and carryout system-based improvement of care.</p>	<p>13-الوعي بدوره في تنمية المجتمع والحفاظ على البيئة</p>
<p>13- Show model attitudes and professionalism.</p>	<p>14-التصرف بما يعكس الالتزام بالنزاهة و المصداقية و قواعد المهنة</p>
<p>14- Demonstrate commitment for lifelong learning and maintenance of competence and ability for continuous medical education and learning in subsequent stages and in occupational and environmental medicine or one of its subspecialties.</p> <p>15- Use recent technologies to improve his practice in occupational and environmental medicine.</p>	<p>15-الالتزام بالتنمية الذاتية المستمرة و نقل علمه و خبراته للآخرين</p>

2- Academic standards

Faculty ARS	NAQAAE General ARS for postgraduate Programs
2.1. A- Established, updated and evidence- based theories, basics and developments of occupational and environmental medicine and relevant sciences.	2-1-1-أ- النظريات و الأساسيات والحديث من المعارف في مجال التخصص والمجالات ذات العلاقة
2.1. B- Basic, methods and ethics of medical research.	2-1-2-ب- أساسيات و منهجيات و أخلاقيات البحث العلمي و أدواته المختلفة
2.1. C- Ethical and medicologal principles of medical practice related to occupational and environmental medicine.	2-1-2-ج- المبادئ الأخلاقية و القانونية للممارسة المهنية في مجال التخصص
2.1. D- Principles and measurements of quality in occupational and environmental medicine.	2-1-2-د- مبادئ و أساسيات الجودة في الممارسة المهنية في مجال التخصص
2.1. E- Principles and efforts for maintains and improvements of public health.	2-1-2-هـ- المعارف المتعلقة بآثار ممارسته المهنية على البيئة وطرق تنمية البيئة وصيانتها
2.2. A- Application of basic and other relevant science to solve occupational and environmental medicine related problems.	2-2-أ- تحليل و تقييم المعلومات في مجال التخصص و القياس عليها و الاستنباط منها
2.2.B- Problem solving based on available data.	2-2-ب- حل المشاكل المتخصصة استنادا علي المعطيات المتاحة
2.2.C- Involvement in research studies related to occupational and environmental medicine.	2-2-ج- إجراء دراسات بحثية تضيف إلى المعارف
2.2. D- Writing scientific papers.	2-2-د- صياغة أوراق علمية
2.2. E- Risk evaluation in the related clinical practice.	2-2-هـ- تقييم المخاطر في الممارسات المهنية
2.2.F- Planning for performance improvement in occupational and environmental medicine.	2-2-و- التخطيط لتطوير الأداء في مجال التخصص

2-2-G- Creation and innovation in the occupational and environmental medicine.	2-2-ز - الابتكار / الإبداع
2.2. H- Evidence – based discussion.	2-2-ح - الحوار والنقاش المبني علي البراهين والأدلة
2.2.I- Discussion making in different situations related to occupational and environmental medicine.	2-2-ط - اتخاذ القرارات المهنية في سياقات مهنية مختلفة
2.3. A- MD students must be able to provide extensive level of patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health extensive level means in depth understanding and from basic science to evidence – based clinical application and possession of skills to manage independently all problems in occupational and environmental medicine. 2.3. B- Master patient care skills relevant to occupational and environmental medicine or patients with all diagnoses and procedures.	2-3-أ - إتقان المهارات المهنية الأساسية و الحديثة في مجال التخصص
2.3. C- Write and evaluate reports for situations related to the field of occupational and environmental medicine.	2-3-ب - كتابة و تقييم التقارير المهنية.
2.4.A-Master practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management	2-3-ج - تقييم و تطوير الطرق و الأدوات القائمة في مجال التخصص
2.4.B- Use competently all information sources and technology to improve his practice.	2-3-د - استخدام الوسائل التكنولوجية بما يخدم الممارسة المهنية
2.4.A-Master practice-based learning and improvement skills that involves	2-3-هـ - التخطيط لتطوير الممارسة المهنية وتنمية أداء الآخرين

<p>investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management</p> <p>2.4.G- Participate in improvement of the education system.</p>	
--	--

II-Program ARS versus program ILOs

Comparison between ARS- ILOS for medical doctorate for occupational and environmental medicine

(ARS)	(ILOs)
<p style="text-align: center;"><u>2-1- Knowledge and understanding</u></p> <p>2-1-A- Established, updated and evidence-based Theories, Basics and developments of v and relevant sciences.</p>	<p style="text-align: center;"><u>2-1- Knowledge and understanding</u></p> <p>2-1-A- Demonstrate in-depth knowledge and understanding of theories, basics and updated biomedical, clinical epidemiological and socio behavioral science relevant to his occupational and environmental medicine as well as the evidence – based application of this knowledge to patient care.</p>
<p>2-1-B Basic, methods and ethics of medical research.</p>	<p>2-1-B- Explain basics, methodology, tools and ethics of scientific medical, clinical research.</p>
<p>2-1-C- Ethical and medicological principles of medical practice related to occupational and environmental medicine field.</p>	<p>2-1-C- Mention ethical, medico logical principles and bylaws relevant to his practice in the field of occupational and environmental medicine.</p>
<p>2-1-D- Principles and measurements of quality in the occupational and environmental medicine field.</p>	<p>2-1-D- Mention principles and measurements of quality assurance and quality improvement in medical education and in clinical practice of speciality.</p>
<p>2-1-E-Principles and efforts for maintains and improvements of public health.</p>	<p>2-1-E- Mention health care system, public health and health policy, issues relevant to this speciality and principles and methods of system – based improvement of patient care in common health problems of the field of occupational and environmental medicine.</p>

<p><u>2-2- Intellectual skills:</u></p> <p>2-2-A-Application of basic and other relevant science to solve occupational and environmental medicine related problems.</p>	<p><u>2-2- Intellectual skills:</u></p> <p>2-2-A- Apply the basic and clinically supportive sciences which are appropriate to occupational and environmental medicine related conditions / problem / topics.</p>
<p>2-2-B-Problem solving based on available data.</p>	<p>2-2-B- Demonstrate an investigatory and analytic thinking “problem – solving “approaches to clinical situation related to occupational and environmental medicine.</p>
<p>2-2-C- Involvement in research studies related to the occupational and environmental medicine.</p>	<p>2-2-C- Plan research projects.</p>
<p>2-2-D Writing scientific papers.</p>	<p>2-2-D- Write scientific paper.</p>
<p>2-2-E-Risk evaluation in the related clinical practice.</p>	<p>2-2-E- Participate in clinical risk management as a part of clinical governance.</p>
<p>2-2-F-Planning for performance improvement in the occupational and environmental medicine field.</p>	<p>2-2-F- Plan for quality improvement in the field of medical education and clinical practice in occupational and environmental medicine.</p>
<p>2-2-G-Creation and innovation in the occupational and environmental medicine field.</p>	<p>2-2-G- Create / innovate plans, systems, and other issues for improvement of performance in his practice.</p>
<p>2-2-H-Evidence – based discussion.</p>	<p>2-2-H- Present and defend his / her data in front of a panel of experts.</p>
<p>2-2-I-Decision making in different situations related to occupational and environmental medicine fields.</p>	<p>2-2-I- Formulate management plans and alternative decisions in different situations in the field of the occupational and environmental medicine.</p>

continuous (ARS)	continuous (ILOs)
<p><u>2-3- Clinical skills:</u></p> <p>2-3-A- MD students must be able to provide extensive level of patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health extensive level means in depth understanding and from basic science to evidence – based clinical application and possession of skills to manage independently all problems in his field of practice.</p> <p>2-3-B- Master patient care skills relevant to occupational and environmental medicine for patients with all diagnoses and procedures.</p>	<p><u>2/3/1/Practical skills (Patient care :)</u></p> <p>2-3-1-A- Provide extensive level of patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. <i>p.s.</i> Extensive level means in-depth understanding from basic science to evidence – based clinical application and possession of skills to manage independently all problems in field of practice.</p> <p>2-3-1-B- Provide extensive level of patient care for patients with all common diagnoses and for uncomplicated procedures related to occupational and environmental medicine.</p> <p>2-3-1-C- Provide extensive level of patient care for non-routine, complicated patients and under increasingly difficult circumstances, while demonstrating compassionate, appropriate and effective care.</p> <p>2-3-1-D- Perform diagnostic and therapeutic procedures considered essential in the field of occupational and environmental medicine.</p> <p>2-3-1-E- Handles unexpected complications, while demonstrating compassion and sensitivity to patient needs and concerns.</p> <p>2-3-1-F- Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families in the occupational and environmental medicine related situations.</p> <p>2-3-1-G- Gather essential and accurate information about patients of the</p>

occupational and environmental medicine related conditions.

2-3-1-H Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence and clinical judgment for the occupational and environmental medicine related conditions.

2-3-1-I- Develop and carry out patient management plans for occupational and environmental medicine related conditions.

2-3-1-J- Counsel and educate patients and their families about occupational and environmental medicine related conditions.

2-3-1-K- Use information technology to support patient care decisions and patient education in all occupational and environmental medicine related clinical situations.

2-3-1-L- Perform competently all medical and invasive procedures considered essential for the occupational and environmental medicine related conditions / area of practices.

2-3-1-M- Provide health care services aimed at preventing the occupational and environmental medicine related health problems.

2-3-1-N- Lead health care professionals, including those from other disciplines, to provide patient-focused care in occupational and environmental medicine related conditions.

<p>2-3-C- Write and evaluate reports for situations related to the field of occupational and environmental medicine.</p>	<p>2-3-1-O- Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets.(Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive timely and legible medical records).</p>
<p><u>2-4- General skills</u></p> <p>2-4-A- Master practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management</p>	<p><u>2/3/2 General skills</u></p> <p>2-3-2-A- Demonstrate the competency of continuous evaluation of different types of care provision to patients in the different area of occupational and environmental medicine.</p> <p>2-3-2-B- Appraise scientific evidence.</p> <p>2-3-2-C- Continuously improve patient care based on constant self-evaluation and <u>life-long learning</u>.</p> <p>2-3-2-D. Participate in clinical audit and research projects.</p> <p>2-3-2-E- Practice skills of evidence-based Medicine (EBM).</p> <p>2-3-2-G- Design logbooks.</p> <p>2-3-2-H- Design clinical guidelines and standard protocols of management.</p> <p>2-3-2-I- Appraise evidence from scientific studies related to the patients' health problems.</p>

<p>2-4-B- Use competently all information sources and technology to improve his practice.</p>	<p>2-3-2-J- Apply knowledge of study designs and statistical methods to the appraisal of clinical studies.</p> <p>2-3-2-K- Use information technology to manage information, access on-line medical information; for the important topics.</p>
<p>2-4-C- Master skills of teaching and evaluating others.</p>	<p>2-3-2-F- Educate and evaluate students, residents and other health professionals.</p>
<p>2-4-D- Master interpersonal and communication Skills that result in effective information exchange and teaming with patients, their families, and other health professionals.</p>	<p>2-3-2-L- Master interpersonal and communication skills that result in the effective <u>exchange of information and collaboration</u> with patients, their families, and health professionals, including:-</p> <ul style="list-style-type: none"> • <u>Present</u> a case. • <u>Write</u> a consultation note. • <u>Inform patients</u> of a diagnosis and therapeutic plan Completing and maintaining comprehensive. • Timely and legible <u>medical records</u>. • Teamwork skills. <p>2-3-2-M- Create and sustain a therapeutic and ethically sound relationship with patients.</p> <p>2-3-2-N- Elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.</p> <p>2-3-2-O- Work effectively with others as a member or leader of a health care team or other professional group.</p>
<p>2-4-E- Master Professionalism behavior, as manifested through a commitment to carrying out professional responsibilities,</p>	<p>2-3-2-P- Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society.</p>

<p>adherence to ethical principles, and sensitivity to a diverse patient population.</p>	<p>2-3-2-Q- Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.</p> <p>2-3-2-R- Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.</p>
<p>2-4-F- Demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively use system resources to provide care that is of optimal value.</p> <p>2-4-G- Participate in improvement of the education system.</p>	<p>2-3-2-S- Work effectively in health care delivery settings and systems related to occupational and environmental medicine including good administrative and time management.</p> <p>2-3-2-T- Practice cost-effective health care and resource allocation that does not compromise quality of care.</p> <p>2-3-2-U- Advocate for quality patient care and assist patients in dealing with system complexities.</p> <p>2-3-2-V- Design, monitor and evaluate specification of under and post graduate courses and programs.</p>
<p>2-4-H- Demonstrate skills of leading scientific meetings including time management</p>	<p>2-3-2-W- Act as a chair man for scientific meetings including time management</p> <p>2-3-2-S- Work effectively in health care delivery settings and systems related to occupational and environmental medicine including good administrative and time management.</p>
<p>2-4-O- Demonstrate skills of self and continuing learning .</p>	<p>From A to H</p>

III-Program matrix
Knowledge and understanding

Course	2/1/A	2/1/B	2/1/C	2/1/D	2/1/E
Course 1 : Medical statistics		✓			
course 2 : Research Methodology		✓			
Course 3 Medicolegal Aspects& Ethics in Medical Practice and Scientific Research			✓		
Course 4: industrial chemistry	✓	✓	✓	✓	✓
Course 5: human and environmental physiology	✓	✓	✓	✓	✓
Course 6 : Advanced occupational and Environmental medicine	✓	✓	✓	✓	✓
Course 7: internal medicine	✓	✓	✓	✓	✓

Intellectual

Course	2/2/A	2/2/B	2/2/C	2/2/D	2/2/E	2/2/F	2/2/G	2/2/H	2/2/I
Course 1 : Medical statistics			✓	✓				✓	
course 2 : Research Methodology			✓	✓				✓	
Course 3 Medicolegal Aspects & Ethics in Medical Practice and Scientific Research								✓	
Course 4: industrial chemistry	✓	✓	✓	✓	✓	✓	✓	✓	✓
Course 5: human and environmental physiology	✓	✓	✓	✓	✓	✓	✓	✓	✓
Course 6 : Advanced occupational and Environmental medicine	✓	✓	✓	✓	✓	✓	✓	✓	✓
Course 7: internal medicine	✓	✓	✓	✓	✓	✓	✓	✓	✓

Practical Skills (Patient Care)

Course	2/3/1/A	2/3/1/B	2/3/1/C	2/3/1/D	2/3/1/E	2/3/1/F	2/3/1/G	2/3/1/H
Course 1 : Medical statistics								
course 2 : Research Methodology								
Course 3 Medicolegal Aspects & Ethics in Medical Practice and Scientific Research								✓
Course 4: industrial chemistry	✓	✓	✓	✓	✓	✓	✓	✓
Course 5: human and environmental physiology	✓	✓	✓	✓	✓	✓	✓	✓
Course 6 : Advanced occupational and Environmental medicine	✓	✓	✓	✓	✓	✓	✓	✓
Course 7: internal medicine	✓	✓	✓	✓	✓	✓	✓	✓

Practical Skills (Patient care)

Course	2/3/1/I	2/3/1/J	2/3/1/K	2/3/1/L	2/3/1/M	2/3/1/N	2/3/1/O
Course 1 : Medical statistics							
course 2 : Research Methodology							
Course 3 Medicolegal Aspects & Ethics in Medical Practice and Scientific Research	✓						
Course 4: industrial chemistry	✓	✓	✓	✓	✓	✓	✓
Course 5: human and environmental physiology	✓	✓	✓	✓	✓	✓	✓
Course 6 : Advanced occupational and Environmental medicine	✓	✓	✓	✓	✓	✓	✓
Course 7: internal medicine	✓	✓	✓	✓	✓	✓	✓

General Skills

Course	2/3/2/A	2/3/2/B	2/3/2/C	2/3/2/D	2/3/2/E	2/3/2/F	2/3/2/G	2/3/2/H
Course 1 : Medical statistics		✓						
course 2 : Research Methodology		✓		✓	✓			
Course 3 Medicolegal Aspects & Ethics in Medical Practice and Scientific Research								
Course 4: industrial chemistry	✓	✓	✓	✓	✓	✓	✓	✓
Course 5: human and environmental physiology	✓	✓	✓	✓	✓	✓	✓	✓
Course 6 : Advanced occupational and Environmental medicine	✓	✓	✓	✓	✓	✓	✓	✓
Course 7: internal medicine	✓	✓	✓	✓	✓	✓	✓	✓

General skill

Course	2/3/2/I	2/3/2/J	2/3/2/K	2/3/2/L	2/3/2/M	2/3/2/N	2/3/2/O	2/3/2/P
Course 1 : Medical statistics	✓		✓					
course 2 : Research Methodology	✓	✓						
Course 3 Medicolegal Aspects & Ethics in Medical Practice and Scientific Research				✓				
Course 4: industrial chemistry	✓	✓	✓	✓	✓	✓	✓	✓
Course 5: human and environmental physiology	✓	✓	✓	✓	✓	✓	✓	✓
Course 6 : Advanced occupational and Environmental medicine	✓	✓	✓	✓	✓	✓	✓	✓
Course 7: internal medicine	✓	✓	✓	✓	✓	✓	✓	✓

General Skills

Course	2/3/2/Q	2/3/2/R	2/3/2/S	2/3/2/T	2/3/2/U	2/3/2/V	2/3/2/W
Course 1 : Medical statistics							
course 2 : Research Methodology							
Course 3 Medicolegal Aspects& Ethics in Medical Practice and Scientific Research							
Course 4: industrial chemistry	✓	✓	✓	✓	✓	✓	✓
Course 5: human and environmental physiology	✓	✓	✓	✓	✓	✓	✓
Course 6 : Advanced occupational and Environmental medicine	✓	✓	✓	✓	✓	✓	✓
Course 7: internal medicine	✓	✓	✓	✓	✓	✓	✓

Annex 7,
Additional information:

Staff members:

s.n.	Name	Position title
1.	Prof. Dr. Eman Morsy Mohamed	Head of the department
2.	Prof. Dr. Farida Ahmed Morshed Allam	Professor
3.	Prof. Dr. Ali Hussein Zarzour	Professor
4.	Prof. Dr. Mohammad Hassan Qayed	Professor
5.	Prof. Dr. Farag Mohamed Moftah	Professor
6.	Prof. Dr. Mahmoud Atteya	Professor
7.	Prof. Dr. Ahmed Mohamed Mahmoud Hany	Professor
8.	Prof. Dr. Hosnia Said Abdel Mageed	Professor
9.	Prof. Dr. Omaima El-Gibaly Mohamed Helmy	Professor
10.	Prof. Dr. Etemad Abd El Raheem El-Shreef	Professor
11.	Prof. Dr. Randa Mohamed Shams El-Deen Moustafa	Professor
12.	Prof. Dr. Eman Mohamed Monazea	Professor
13.	Prof. Dr. Ekram Mohamed Abdel Khalek	Professor
14.	Prof. Dr. Dalia Galal Mahran	Professor
15.	Prof. Dr. Sabra Mohamed Ahmed	Professor
16.	Prof. Dr. Hala Hassan Ibrahim Abu Faddan	Professor
17.	Prof. Dr. Faten Mohamed Rabea	Professor
18.	Prof. Dr. Medhat Araby Khalil	Professor
19.	Prof. Dr. Manal Mohamed Moustafa Darwish	Professor
20.	Prof. Dr. Ahmed Mohamed Khair	Professor
21.	Assis. Prof. Doaa Mazen Mohamed	Assistant professor
22.	Assis. Prof. Asmaa Mohamed Ahmed Soliman	Assistant professor
23.	Assis. Prof. Taghreed Abd El -Aziz	Assistant professor
24.	Assis. Prof. Mirette Mamdouh Wesly	Assistant professor
25.	Assis. Prof. Doaa Mohamed Osman	Assistant professor
26.	Assis. Prof. Shimaa Abdel Samee	Assistant professor
27.	Dr. Heba Mahmoud Mohamed	Lecturer
28.	Dr. Mariam Roshdy El-khyat	Lecturer
29.	Dr. Shimaa Hosny Hassan	Lecturer
30.	Dr. Heba Gaafer Ali	Lecturer

Opportunities within the department:

- Computer lab for post graduate students.
- Internet points available at the computer lab.
- Specialist of computer and statistics.
- The computer lab is equipped with data show
- Seminar room with data show and computer for seminars and workshops
- Two mini buses for field visits.
- One car for field visits for smaller number
- Electronic Library of Scientific Seminars and self learning
- funded projects eg. in collaboration with Johns Hopkins School of Public health
- competitive research grants funded by project in collaboration with Johns Hopkins School of Public health, occupational medicine environmental health

Department quality control insurance for completing the program:

- ✚ Evaluation by the Department head and staff members.
- ✚ Regular assessments.
- ✚ Log book monitoring

(End of the program specification)