كلية الطب
جامعة أسيوط

Faculty of Medicine
Quality Assurance Unit

Master (M.Sc.) Degree Program and Courses Specifications for

Forensic Medicine and clinical toxicology

(According to currently applied Credit point by laws)

Forensic Medicine and Clinical Toxicology Department

Faculty of Medicine
Assiut University
2022-2023

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Master degree of *Forensic Medicine and Clinical Toxicology Department*

A. Basic Information

- **Program Title:** Master degree of Forensic Medicine& Clinical Toxicology.
- **Nature of the program: Single.**
- **Responsible Department:** Department of Forensic Medicine& Clinical Toxicology - Faculty of Medicine- Assiut University
- **Program Academic Director (Head of the Department):** **Prof.Dr.** Randa Hussein Abd ElHady
- **Coordinator (s):**
  - **Principle coordinator: Prof Dr.** . Nagwa M. Ghandour
  - **Assistant coordinator (s): Associate Prof Nora zidan**
- **Internal evaluators: Dr.** Afaf M.Farghaly
- **External evaluator (s):**

– Prof.Dr. Mohamed Abdel Mohsen. El-Minya University

- **Date of Approval by the Forensic Medicine & Clinical Toxicology Departement: 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: 4 courses+ 1 elective course**

  First part: three courses + 1 elective Second part: one course.

B. Professional Information

1- Program aims

1. To introduce candidates to the basics of scientific medical research and its ethics.
2. To know principles of medical ethics and malpractice.
3. To enable students to improve their critical appraisal skills; in forensic cases, forensic pathology and health care of toxicological cases and to interpret their findings appropriately.
4. To know and apply principles and practice of current analytical techniques in a specialist discipline of Forensic Chemistry.
5. To develop professional skills in application of knowledge and understanding of selected forensic problems and management of poisoning cases.
6. To undertake complex evaluative procedures in associated laboratory diagnostic tests and techniques related to forensic and poisoning cases.
7. To be able to:

- Understand the basics of Forensic Medicine and Clinical Toxicology.
- Demonstrate a core understanding of human pathology.
- Have an in-depth knowledge of the principles of clinical Toxicology.
- Become familiar with the terminology and problems of Forensic medicine.
- Develop an approach to identify tissue types and interpret the features of pathological processes, and to gain experience in handling tissue samples.
- Provide an understanding of techniques & quality assurance issues in the diagnostic setting related to Forensic Medicine& Clinical Toxicology cases.

- Develop a systematic understanding, critical awareness and skills in management of toxicological cases.
- Develop a critical evaluation of techniques used for the diagnosis and monitoring of poisoned patient.
- Pursue higher studies and subspecialties.
- Understand and get the best of published scientific research and do their own.
- Perform a research project design and analysis.
- Be proficient in experimental design, bioinformatics, data mining and interpretation.
- Demonstrate skills in oral and written presentation and in critical review of the literature.

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

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

2/1Knowledge and understanding:

A. Explain the essential facts and principles of relevant basic sciences including, Forensic pathology and Forensic Chemistry.
B. Mention essential facts of clinical supportive sciences including Clinical toxicology.
C. Demonstrate sufficient knowledge of the main subjects including postmortem autopsy, poisoning cases (diagnosis, treatment), Drug dependence and its squeale.
D. Give the recent and update developments in the most important themes related to Forensic Medicine and Clinical Toxicology.
E. Mention the basic ethical and medicolegal principles that should be applied in practice and are relevant to the field of Forensic Medicine and Clinical Toxicology.
F .Mention the basics and standards of quality assurance to ensure good practice in the field of Forensic Medicine and Clinical Toxicology.
G . State the impact of common problems related to the field of Forensic Medicine and Clinical Toxicology on the society and how good practice can improve these problems.
H .Mention the ethical and scientific principles of medical research methodology.

2/2 Intellectual outcomes

A. Correlate the relevant facts of relevant basic and clinically supportive sciences with reasoning, diagnosis and management of common problems Forensic medicine and toxicology

B. Demonstrate an investigatory and analytic thinking approach (problem solving) to common clinical or practical situations related to Forensic medicine and toxicology

C .Design and /or present a case or review (through seminars/journal clubs.) in one or more of common themes or problems relevant to the. Forensic medicine and toxicology

D. Formulate management plans and alternative decisions in different situations in the field of Forensic Medicine and Clinical Toxicology.

2/3 Skills

2/3/1 Practical skills

A. Demonstrate competently relevant laboratory skills related to Forensic Medicine and Clinical Toxicology.

B. Use the up to date technology for the conditions related to Forensic Medicine and Clinical Toxicology.

C. Develop plans for performing research experiments related to Forensic Medicine and Clinical Toxicology.

D. Carry out common experiments related to Forensic Medicine and Clinical Toxicology.

E. Counsel and educate undergraduate students, technicians and junior staff, in the lab about conditions related to Forensic Medicine and Clinical Toxicology ; including handling of samples, devices, safety and maintenance of laboratory equipments.

F. Use information technology in situations related to Forensic Medicine and Clinical Toxicology.

G. Share in providing health care services aimed at supporting patient care and solving health problems

H. Write competently all forms of professional reports related to Forensic Medicine and Clinical Toxicology (lab report, toxicological report, trauma and infirmity report and other medical report).

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- Perform practice-based improvement activities using a systematic methodology (share in audits and risk management activities and use logbooks).
B- Appraises evidence from scientific studies.
C- Conduct epidemiological Studies and surveys.
D- Perform data management including data entry and analysis and using information technology to manage information, access on-line medical information; and support their own education.
E- Facilitate learning of students, lab technical staff and other health care professionals including their evaluation and assessment.

Interpersonal and Communication Skills

F- Maintain therapeutic and ethically sound relationship with patients, their families, lab technical staff and other health professionals.
G- Elicit & provide information using effective nonverbal, explanatory, questioning, and writing skills.
H- Work effectively with others as a member of a team or other professional group.

Professionalism

I- Demonstrate respect, compassion, and integrity; in response to the needs of patients and society.

J- Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.

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

Systems-Based Practice

L- Work effectively in relevant academic and health care delivery settings and systems including good administrative and time management skills.

M- Adopt cost-effective practice and resource allocation that does not compromise quality of services.

N- Assist patients in dealing with system complexities.

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

Academic standards for master degree in a academic *Forensic Medicine and Clinical Toxicology*

Assiut Faculty of Medicine developed master degree programs' academic standards for different academic &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 17-6-2009. 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

1. ACGME (Accreditation Council for Graduate Medical Education).
http://www.acgme.org/acWebsite/navPages/nav_Public.asp
2. **.www.apothecaries.org.**
3. www.strath.ac.uk/chemistry.
4.www.National Association of Medical Examiners (name).org
5.www.forensicscience.ufl.edu/idex.php?/programs/cert_clitox.

5. Program Structure and Contents

A. Duration of program: 3 – 5 years

B. Structure of the program:

Total number of points:
Didactic 32 (17.8%), practical 126 (70%) thesis 20 (11.1%).
elective courses 2 (1.1) Total 180 .

First part

Didactic (8 +2 elective) (25%), practical 30 (75%).Total 40

Second part

Didactic 24 (20%) practical 96 (80%).total 120

According the currently applied bylaws:

Total courses 160 CP
Compulsory courses: 98.9%
Elective course: 2 credit point: 1.1%

	Points	**% from total**
▪ Basic science courses	18	10%
Humanity and social courses	2	1.1%
▪ Speciality courses	140	77.8%
▪ Others (Computer, …)		
▪ Field training	116	64.4%
Thesis	20	11.1%

C. C. Program Time Table

A. Duration of program 3 years maximally 5 years divided into

- **Part 1: (One year)**
  Program-related basic science courses and ILOs + elective courses
  Students are allowed to sit the exams of these courses after 12 months from applying to the M Sc degree.
  One elective course can be set during either the 1st or 2nd parts.

- **Thesis**
  For the M Sc thesis;
  MSc thesis subject should be officially registered within 6 months from application to the MSc degree,
  Discussion and acceptance of the thesis could be set after 12 months from registering the MSc subject;
  It should be discussed and accepted before passing the second part of examination)
- **Part 2 (2 years)**

Program –related speciality courses and ILOs
Students are not allowed to sit the exams of these courses before 3 years from applying to the MSc degree.

The students pass if they get 50% from the written exams and 60% from oral and clinical/practical exams of each course and 60% of summation of the written exams, oral and clinical/practical exams of each course
Total degrees 1600 marks.
400 marks for first part
1200 for second part
Written exam 40% - 70%.
Practical and oral exams 30% - 60%.

D. Curriculum Structure: (Courses):

courses of the program:

Modules/ Units delivering courses and student work load list	Course Code	Core Credit points		
		Didactics	training	total
First Part				
Basic science courses (8CP) **Course 1: "Forensic Pathology"** **Course 2: "Forensic chemistry"** **Course 3: " Clinical Toxicology" (Basic)** Total	**FMT205A** **FMT210A** **FMT210B**	2 2 4 8	3 3 4 10	
Elective courses*	2CP			
Practical training and scientific activities				
A. Practical training in compulsory basic science courses (10 CP)	**FMT205A** **FMT210A** **FMT210B**	**10**		**10**
B. Practical training in Speciality course (20 CP) **Clinical Toxicology Training in Speciality University Hospital (Ain Shams)**	**FMT210C**	**20**		**20**
Total of the first part		**40**		
Second Part	**Speciality courses** **Speciality Clinical Work**			
Speciality Courses **Course 4: "Forensic Medicine and Toxicology Advanced"** **Unit 1 " Forensic Medicine "** **Unit 2"Trauma & Infirmity"** **Unit 3 " Clinical Toxicology "Advanced I"** **Unit 4"Clinical Toxicology" "Advanced II"**	**FMT210C**	**24**		
Training and practical activities in Forensic Medicine and Toxicology "Advanced"		**96**		
Total of the second part		**24**	**96**	**120**
Thesis	**20**			
Total of the degree	**180**			

 # Didactic (lectures, seminars, tutorial)

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#:

- Medical statistics.
- Evidence based medicine.
- Medicolegal Aspects and Ethics in Medical Practice and Scientific Research
- Quality assurance of medical education
- Quality assurance of clinical practice.
- Hospital management

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

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

Thesis:

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

' Titles' list	% from total Marks	Level (Year)	Core Credit points		
			Didactic	training	Total
Course 1: "Forensic Pathology"	2.8	1,2	2	3	5
Course 2: "Forensic chemistry"	2.8	1,2	2	3	5
Course 3: Clinical Toxicology" (Basic)	4.4	1,2	4	4	8
				20	20
Practical training in Speciality course	11.1				
Course 4: Forensic Medicine and Toxicology (Advanced)		2&3			
	16.7		6	24	30
Unit 1 " Forensic Medicine "	16.7		6	24	30
Unit 2"Trauma & Infirmity"	16.7		6	24	30
Unit 3 " Clinical Toxicology "Advanced I" Unit 4"Clinical Toxicology""Advanced II"	16.7		6	24	30
Total No. of Courses: 4		-	32 (+2 elective)	126	160 (+20 Thesis)

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:

a. MBBCh Degree from any Egyptian Faculty of Medicine
b. Equivalent Degree from medical schools abroad approved by the Ministry of Higher Education
c. One year appointment within responsible department (for non Assiut University based registrars)

II. Specific Requirements:

- Fluent in English (study language)

VACATIONS AND STUDY LEAVE

The current departmental policy is to give working candidate 2 weeks leave prior to first/ second part exams.

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 could be set at 12 months from registering to the MSc degree.
- Examination of the second part cannot be set before 3 years from registering to the degree.

- Discussion of the MSc thesis could be set after 1 year from officially registering the MSc subject before setting the second part exams.
- The minimum duration of the program is 3 years.

The students are offered the degree when:

1. Passing the exams of all basic science, elective and speciality 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 MSc thesis.

9- Program assessment methods and rules (Annex IV)

Method	ILOs measured
Written examinations: Structured essay questions Objective questions MCQ Problem solving	K & I
Clinical: Practical OSPE	K ,I, P &G skills
Structured oral	K ,I &G skills
Logbook assessment	All
Research assignment	I &G skills

Weighting of assessments:

Courses		Degrees			
	Course code	Written Exam	Oral Exam	Practical / Clinical Exam	Total
First Part					
Basic science Courses:					
Course 1: "Forensic Pathology"	FMT210A	50	25	25	100
Course 2 : "Forensic chemistry"	FMT210B	50	25	25	100
Course 3:"Clinical Toxicology" (Basic)	FMT210C	100	50	50	200
Total of the first part					400
Second Part					
Speciality Courses:					
Course 4 Forensic Medicine and Toxicology (Advanced)	FMT210D	600(4 papers , 150 marks for each)	300	300	1200
Total of the degree		800	400	400	1600
Elective course		50	50		100

*** 25% of the oral exam for assessment of logbook**

Total degree 1600

400 marks for first part

1200 for second part

Written exam 50% (800 marks).

Clinical/practical and oral exams 50% (800 marks)

Examination system:

First part:

- Written exam one paper 2 hours in Forensic Pathology + Oral & Practical exam
- Written exam one paper 2 hours in Forensic Chemistry + Oral & Practical exam
- Written exam one paper 3 hours in Clinical Toxicology(Basic) + Oral & Practical exam

➢ Second part:

Written exams four papers 3 hours each in Forensic Medicine and Toxicology (advanced) + Oral & Practical exam:

First paper (3hours) in **Unit 1 " Forensic Medicine "**

Second paper (3 hours) in **Unit 2"Trauma & Infirmity"**

Third paper (3 hours) in **Unit 3 " Clinical Toxicology " (Advanced I)**

Fourth paper (3 hours) in **Unit 4" Clinical Toxicology "(Advanced II)**

➢ Elective courses

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

10-Program evaluation

By whom	method	Sample
Quality Assurance Unit	Reports Field visits	#
Internal evaluators	Report	1
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.

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:**	**ProfDr.NagwaM. Ghandour**		
▪ **Head of the Responsible Department (Program Academic Director):**	**Prof.** Randa Hussein Abd ElHady		

Annex 1, Specifications for Courses / Modules

Annex 1: specifications for courses

Course 1
Forensic pathology

- ***Forensic Medicine and Clinical Toxicology*** **Departement**
- **Faculty of Medicine**
- **Assiut University**
- **2022-2023**

I. Course data

- **Course Title:** Forensic Pathology
- **Course** Code:FMT205A
- **Speciality** Forensic Medicine and Clinical Toxicology
  - **Number of credit points (CP): Didactic 2 CP (40%) practical 3 CP (60%).Total 5CP (100%).**
- **Department (s) delivering the course:** Departments of Pathology and Forensic Medicine & Clinical Toxicology - Faculty of Medicine- Assiut University- Assiut-EGYPT
- **Coordinator (s):**
- **Course coordinator: ProfDr.NagwaM. Ghandour**

Assistant coordinator (s): Associate professor:-Doaa Mohamed

Courses coordinators: to be assigned annually according to the approval of the Forensic Medicine and Clinical Toxicology Department council (annual notification will be send over to QAU and vice-Dean of post graduate and research affairs).**:**

- **Date last reviewed:** 4-2022
- **General requirements (prerequisites) if any :**

-None

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

2. Course Aims

1. Acquire a basic knowledge which is necessary for understanding principles of Forensic Pathology.
2. Apply this knowledge to perform competently examination of organs and tissues by naked eye and microscopically for forensic pathology.
3. Be able to communicate their ideas in a report form of court testimony.
4. Become adept at retrieving and assimilating information from a variety of electronic and text sources;
5. Learn to solve problems as a group.

3. Course intended learning outcomes (ILOs):

A-Knowledge and understanding

ILOs	*Methods of teaching/ Learning*	*Methods of Evaluation*
A. Describe medicolegal aspects of common clinical conditions and diseases related to: 1-Cardiovascular diseases: a)Ischemic heart diseases b)Heart Failure 2-Diseases of respiratory system: a)Inflammatory, neoplastic and occupational lung diseases. b) Lung diseases related to toxins exposure, trauma or drowning. 3- Diseases of digestive system: a) Ulcers of stomach and duodenum. b) Cause of Hematemesis. c) Intestinal obstruction. d) Acute hemorrhagic pancreatitis. e) Neoplastic diseases.	Didactic (lectures, seminars, tutorial, Critically appraised topic) Educational Prescription Practical Work(Gross, microscopical)	Written, practical and oral examination. Log Book

f) Injuries related to toxins and trauma. 4-Diseases of female genital system: a) Uterine bleeding(causes and effects)including abortion ,trauma and infection. b) puerperal sepsis 5-Diseases of Endocrine glands: Diabetes 6-Diseases of nervous system: a) Trauma& brain injuries. b) Diseases of cerebral blood vessels (including nerve injuries due to toxins or trauma). c) Meningitis. d) Tumors 7-Disease of kidney: a) Hydronephrosis. b) Renal failure. c) Contracted kidney. d) Causes of hematuria. e) Renal damage due to trauma or toxins. 8- Musculoskeletal system: Fractures		
B. Mention the basics and principles of: 1-Inflammatory process. 2-Repair. 3-Degenerations and Necrosis. 4-Circulatory disturbances. 5-Disturbances of growth. 6-Tumors. 7-Preservation of tissue specimen.		
C. State update and evidence based Knowledge related to the course.		
D .Memorize the facts and principles of the other relevant basic and clinically supportive sciences related to the course.		
E .Mention the basic ethical and medicolegal principles relevant to the		

course		
F-Mention the basics of quality assurance to ensure good professional skills in Forensic Pathology.		
G-Mention the ethical and scientific principles of medical research		

B. Intellectual outcomes

ILOs	*Methods of teaching/ learning*	*Methods of Evaluation*
A. Correlates the facts of relevant basic and clinically supportive sciences with conditions and diseases of relevance to pathological changes of different organs by naked eye and microscopically for the course.	Didactic (lectures, seminars, tutorial Critically appraised topic, Educational Practical prescription	Written , oral and practical examination Log book
B. Demonstrate an investigatory and analytic thinking (problem solving) approaches to conditions relevance to pathological changes of different organs by naked eye and microscopically for the course.		
C .Design and present audits, cases, seminars in common problems related to the course including occupational exposure.		

C. Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. perform the basic lab skills essential to the course: tissue sampling ,preparing and staining	Practical work	Written, oral and practical examination. Log Book
B. use instruments and devices in evaluation of various pathological conditions		
C. Interpret non invasive/invasive procedures/ experiments up-to-date technology for tissue sampling, performance and preparation of slides .		
D. Perform trainings in examination of organs by naked eye and microscopically for the course.		
E. Write and evaluate the different pathological conditions report		
F-Perform the basic experiments to be utilized in the research		
G. Use information technology to support decisions in common situations related to the course.		

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(audit, logbook)	supervision Museum specimens. Slides preparation and examination.	Written, oral and practical examination. Log Book
B. Appraises evidence from scientific studies Researches and evidence based practice and internet updates.		
C. participate in one audit or survey related to the course		
D. Perform data management including data entry and analysis.		
E. Facilitate learning of junior students.		

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
F. Maintain ethically sound relationship with others.	Observation & supervision Seminars Lectures Hand on workshops	Portfolio Simulation Record Review Log book
G. Elicit information using effective nonverbal, explanatory, questioning, and writing skills.		
H. Provide information using effective nonverbal, explanatory, questioning, and writing skills.		
I. Work effectively with others as a member of a health care team or other professional group.		
J. Present a case in different pathological conditions related to forensic medicine and toxicology	Seminars Lectures Hand on workshops	Log book
K. Write a report on slide or postmortem examination.		

Professionalism

ILOs	*Methods of teaching/ learning*	*Methods of Evaluation*
L. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society	Observation & supervision Didactic (lectures) Educational prescription	1.Objective structured clinical examination 2.Student survey
M. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices		
N. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		

Systems-Based Practice

ILOs	**Methods of teaching/ learning**	**Methods of Evaluation**
O.Work effectively in relevant health care delivery settings and systems.	Observation Senior staff experience	1-student survey 2. portfolios
P.Practice cost-effective health care and resource allocation that does not compromise quality of care.		
Q. Assist patients in dealing with system complexities.		

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

Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge A	**Intellectual B**	**Practical skill C**	**General Skills D**
Medicolegal aspects of diseases of cardiovascular system	A-D	A-C	A-G	A-Q
Medicolegal aspects of diseases of respiratory system	A-D	A-C	A,C,D,F	A-Q
Medicolegal aspects of diseases of digestive system	A-E	A-C	A-G	A-Q
Medicolegal aspects of diseases of female genital system	A,B,E	A	A-G	A-Q
Medicolegal aspects of diseases of Endocrine glands	A-D	A,C	A-F	A-Q
- Medicolegal aspects of diseases of nervous system	A,B,E	A	C	A-Q
Disease of kidney	A-D	A,C	A,C,D,F	A-Q
Medicolegal aspects of diseases Musculoskeletal system(Fractures)	A,B,E	A-C	A-G	A-Q
Medicolegal aspects of inflammatory process& Repair	A,B,E	A	A,C,D,F	A-Q
Degenerations and Necrosis	A-D	A	C	A-Q
Circulatory disturbances	A-E	A,C	A,C,D,F	A-Q
Disturbances of growth	A,B,E	A	C	A-Q
Tumors	A,B,E	A,C	A,C,D,F	A-Q

5. Course Methods of teaching/learning:

1. Lectures, didactics
2. Assignments
3. Discussion
4. Exercises, practical work
5. Educational prescription.
6. Seminar.
7. Tutorial.
8. Observations and supervision.
9. Scientific meetings.
10. Written and oral communication.

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

1. Extra Didactic (lectures, seminars, tutorial) according to their needs
2. Extra training according to their needs

7. Course assessment methods:

i. Assessment tools:

1. Written examination
2. Oral exam
3. Practical exam
4. Objective structural assessment.
5. Logbook.

ii. Time schedule: 1 year

iii. Marks: 100 marks (50 for written +25 for oral +25 for practical)

8. List of references

i. Lectures notes.

Department lecture notes

ii. Essential books

- KUMAR, V., COTRAN, R.S., and ROBBINS, S.L. Robbins Basic Pathology. 7th ed. Saunders Publisher (2013)

iii. Recommended books

-Netter's Illustrated Human Pathology Updated Edition,2015.

-Human pathology by AG Nicholls - 1927

- Histopathologyby Ivan Damjanov (Author), Peter A. McCue (Author), Matthew Chansky (Illustrat 1996)

-

iv. Periodicals,Web sites, … etc

- American Journal of surgical pathology
- http:// http://www.pathmax.com/
- http://www-medlib.med.utah.edu/WebPath/LABS/LABMENU.html#2
- http://www.med.uiuc.edu/PathAtlasf/titlePage.html
- http://www.medscape.com/pathologyhome
- http://pathology2.jhu.edu/cytopath/masterclass/Homepage.ht
- http://www.gotpath.com/

9. Signatures

Course Coordinator: **ProfDr.NagwaM. Ghandour**	**Head of the Department:** **Dr.** Randa Hussein Abd ElHady
Date:	**Date:**

Course 2
Forensic Chemistry

- **Name of department:** ***Forensic Medicine and Clinical Toxicology***
- **Faculty of Medicine**
- **Assiut University**

2022-2023

1. Course data

- **Course Title:** Forensic Chemistry
- Course code: FMT210A
- **Speciality: Forensic Medicine and Clinical Toxicology.**
  - **Number of credit points(CP): Didactic 2 CP (40%) practical 3 CP (60%).Total 5CP(100%).**
- **Department (s) delivering the course:** Department of Forensic Medicine & Clinical Toxicology - Faculty of Medicine- Assiut University- Assiut-EGYPT
- **Coordinator (s):**
- **Course coordinator: ProfDr.NagwaM. Ghandour**

-Assistant coordinator (s): Prof Dr. Safaa M. George

Courses coordinators: to be assigned annually according to the approval of the Forensic Medicine and Clinical Toxicology Department council (annual notification will be send over to QAU and vice-Dean of post graduate and research affairs).

- **Date last reviewed:** 4-2022
  - **General requirements (prerequisites) if any :-**None.
- **Requirements from the students to achieve course ILOs are clarified in the joining log book.**

2. Course Aims

1. **Identify relevant laboratory skills for Principles of toxicological detection of different types of poisonous substances and drugs.**
2. **Describe relevant laboratory skills for Principles of counterfeit and forgery.**

3. Course intended learning outcomes (ILOs):

A-Knowledge and understanding

ILOs	*Methods of teaching/ Learning*	*Methods of Evaluation*
A-Describe essential concepts and common clinical conditions and related to detection of: a- Corrosives (Acids and alkali) - Irritant - Volatile toxins - Gaseous toxins - Alkaloids - Insecticide - Drugs of abuse - Antibiotics - Gun powder and explosions - Detection of blood stain - Detection of Semen stain b -Separation methods (thin layer chromatography, high performance liquid chromatography, gas chromatography) c- Reagents in forensic chemistry d- Scheme for detection of drug overdose	Didactic (lectures, seminars, tutorial) -Journal club, -Critically appraised topic, Educational prescription	Written exam Portfolios Log book Oral exam
B-Mention the basics and principles essential investigatory and analytic thinking approach to the course. - C-Mention the basic ethical and medicolegal principles relevant to the Counterfeit and forgery.		

D-Mention the basics of quality assurance to ensure good professional skills in his field.		
E-Mention the ethical and scientific principles of medical research		

B. Intellectual outcomes

ILOs	*Methods of teaching/ learning*	*Methods of Evaluation*
A. Correlates the facts of relevant basic and clinically supportive sciences with conditions and diseases of relevance to the course**.**	Didactic (lectures, seminars, tutorial) -Journal club, -Critically appraised topic, Educational prescription	Portfolios 3.Log book 4.Oral exam 5.Written exam
B. Demonstrate an investigatory and analytic thinking (problem solving) approaches to conditions relevance to the course.		
C. Design and present audits, cases, seminars in common problems related to the course		

C. Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
A-Perform the basic lab skills essential to the course: detection of different types of poisonous substances and drugs which operate on human body (including corrosives, heavy metals, volatile, gaseous, plant alkaloids, pesticides, animal, food, antidepressants and antihistaminic poisoning)	- seminar -Direct observation of the practical work -Problem Solving	log book - Objective structure
B. Use instruments and devices in evaluation of counterfeit and forgery.		
C-Write and evaluate counterfeit and forgery and toxicological analysis reports		
D. Perform the basic experiments in related basic sciences to be utilized in the research work		
E. Use information technology to support decisions in situations related to counterfeit and forgery.		
F. Counsel and educate students, technicians and junior staff, in the lab about methods of identification including handling of samples, devices, safety and maintenance of laboratory equipments.		

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(audit, logbook)	-Observation and supervision -Written & oral communication	Log book
B. Appraises evidence from scientific studies as researches, evidence based practice and internet updates.	Journal clubs Discussions in seminars	
C. participate in one audit or survey related to the course		
D. Perform data management including data entry and analysis.		
E. Facilitate learning of junior students and other health care professionals.		

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
F. Maintain ethically sound relationship with others (senior staff, colleagues and technicians).	-Observation and supervision Communication	Simulation Record review (report
G. Elicit information using effective nonverbal, explanatory, questioning, and writing skills.		
H. Provide information using effective nonverbal, explanatory, questioning, and writing skills.		
I. Work effectively with others as a member of a health care team or other professional group.		
J. Present a case in detection of different types of poisonous substances		
K. Write a report in counterfeit and forgery		

Professionalism

ILOs	*Methods of teaching/ learning*	*Methods of Evaluation*
L. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society	Observation -Senior staff experience	1.Objective structured practical examination 2.Student survey
M. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices		
N. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		

Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
O. Work effectively in relevant health care delivery settings and systems.	Observation -Senior staff experience	1-student survey 2. portfolios
P. Practice cost-effective health care and resource allocation that does not compromise quality of care.		
Q. Assist patients in dealing with system complexities.		

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

Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge	Intellectual	Practical skills	General Skills
-Corrosives (Acids and alkali) Detection	A,B,E	A-C	A,B,E	A-Q
- Irritant Detection	A-D	A-C	A-D	A-Q
-Volatile toxins detection	A-D	A-C	A-D	A-Q
-Gaseous toxins detection	A-E	A-C	A-E	A-Q
-Alkaloids detection	A,B,E	A-C	A,B,E	A-Q
-Insecticide detection	A-D	A-C	A-D	A-Q
- Detection of drugs of abuse	A-E	A-C	A-E	A-Q
- Antibiotics detection.	A,B,E	A-C	A,B,E	A-Q
-Gun powder and explosions	A,B,E	A-C	A,B,E	A-Q
- Detection of blood stain& Detection of Semen stain	A-D	A-C	A-D	A-Q
Separation methods (thin layer chromatography, high performance liquid chromatography, gas chromatography)	A-E	A-C	A-E	A-Q
- Reagents in forensic chemistry	A,B,E	A-C	A,B,E	A-Q
Scheme for detection of drug overdose	A-E	A-C	A-E	A-Q

5. Course Methods of teaching/learning:

1. **Didactics: Lectures, tutorial,**
2. **Practical training.**
3. **Case studies (problem solving).** Demonstrations**.**
4. **Seminars, scientific meeting.**
5. **Journal club.**
6. **Educational prescription.**
7. **Critical appraisal topics.**
8. **Observation & supervision**

9. **Discussion**
10. **Written and oral communication.**

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

1. Extra Didactic (lectures, seminars, tutorial) according to their needs
2. Extra training according to their needs

7. Course assessment methods:

i. Assessment tools:

1. Written examination
2. Oral exam
3. Practical exam
4. Objective structural assessment.
5. Logbook.
6. Portfolio.
7. Simulation.
8. Record, review reports.
9. Student survey.

ii. Time schedule: 1 year

iii. Marks: 100 marks (50 for written +25 for oral +25 for practical)

8. List of references

i. Lectures notes.

ii. Essential books

1- Shannon, M. W., Borron, S. W., Burns, M. J., Haddad, L. M., & Winchester, J. F. (2007). Haddad and Winchester's clinical management of poisoning and drug overdose. Philadelphia: Saunders/Elsevier.

- **Gold Frank,L., Flwenbaum,N., Lewin,N., Weisman ,R., Howland,M. and Hoffman, R. (2019):**Toxicological Emergency.11th edition, Mc GrawHill Company, USA.
- **Ballantyne B., Marrs T. and Syversen T.(1999):**General and Applied Toxicology.2nd edition. MACMILLAN REFERENCE LTD.UK.

9. Signatures

Course Coordinator: ProfDr.NagwaM. Ghandour	**Head of the Department:** **Prof.** Randa Hussein Abd ElHady
Date:	**Date:**

Course 3 : Clinical Toxicology (Basic)

- **Name of department:** ***Forensic Medicine and Clinical Toxicology***
- **Faculty of Medicine**
- **Assiut University**

2022-2023

I. Course data

- **Course Title: Clinical Toxicology.**
- Course code: FMT210B
- **Speciality: Forensic Medicine and Clinical Toxicology.**
  - **Number of credit points(CP): Didactic 4 CP (50%) practical 4 CP (50%).Total 8CP(100%).**
- **Department (s) delivering the course:** Department of Forensic Medicine & Clinical Toxicology - Faculty of Medicine- Assiut University- Assiut-EGYPT
- **Coordinator (s): ProfDr.NagwaM. Ghandour**

-- Assistant coordinator (s): Prof Dr,Safaa M goerge

Courses coordinators: to be assigned annually according to the approval of the Forensic Medicine and Clinical Toxicology Department council (annual notification will be send over to QAU and vice-Dean of post graduate and research affairs).

- **Date last reviewed:** 4-2022
  - **General requirements (prerequisites) if any :-** None.
- **Requirements from the students to achieve course ILOs are clarified in the joining log book.**

2. Course Aims

1. Provide an extensive, compact review of "need to know" toxicology management material for all health providers.
2. Prepare Specialists in Poison Information.
3. The candidate is able to acquire the basic knowledge and skills that are essential and appropriate to common toxicological problems.

3. Course intended learning outcomes (ILOs):

A-Knowledge and understanding

ILOs	*Methods of teaching/ Learning*	*Methods of Evaluation*
- A- Describe essential concepts of General toxicology - B-Describe essential concepts and common clinical conditions and diseases related to - Corrosive toxicity - Heavy metals toxicity - Volatile toxicity - Gaseous toxicity - Plant toxicity - Insecticides toxicity - Food Poisoning & Food additives Toxicity. - Antidepressant toxicity - Antihistaminic toxicity - Hydrocarbons toxicity - Vitamins toxicity - Designer drugs - Air pollution - Animal (Scorpion and Snake) toxicity - Drugs of abuse	Didactic (lectures, seminars, tutorial) -Journal club, -Critically appraised topic, Educational prescription	Written exam Portfolios Log book Oral exam
C- Mention basics and principles		

essential to the course topics.		
D-State update and evidence based Knowledge related to the course topics.		
E.Memorize the facts and principles of the other relevant basic and clinically supportive sciences related to the course topics.		
F.Mention the basic ethical and medicolegal principles relevant to the course.		
G.Mention the basics of quality assurance to ensure good professional skills in his field.		
H.Mention the ethical and scientific principles of medical research		

B. Intellectual outcomes

ILOs	*Methods of teaching/ learning*	*Methods of Evaluation*
- A-Correlates the facts of relevant basic and clinically supportive sciences with conditions and diseases of relevance to laboratory diagnose/ experimental skills of the different types of poisonous substances and drugs which operate on human body (including corrosives, heavy metals, volatile, gaseous, plant alkaloids, Insecticides, animal, food, antidepressants,antihistaminic, Hydrocarbons ,Vitamins , Designer drugs and Drugs of abuse) as regard classification, mechanism of action, clinical features of toxicity, circumstances, diagnosis and clinical management.	Didactic (lectures, seminars, tutorial) -Journal club, -Critically appraised topic, Educational prescription	1.Portfolios 2.Procedure/stains 3.Log book 4.Oral exam 5.Written exam
B-Demonstrate an investigatory and analytic thinking (problem solving) approaches to conditions relevance to Clinical Toxicology.		

C-Design and present audits, cases, seminars in common problems related to Clinical Toxicology.		
D. Formulate management plans and alternative decisions in different situations in the field of Clinical Toxicology.		

C. Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
A- perform the basic lab skills essential to the course: laboratory diagnose/ experimental skills of the different types of poisonous substances and drugs which operate on human body (including corrosives, heavy metals, volatile, gaseous, plant alkaloids, central nervous system, pesticides, animal, food, antidepressants and antihistaminic poisoning as regard classification, mechanism of action, clinical features of toxicity, circumstances, diagnosis and clinical management	- seminar -Direct observation of the practical work -Case study	Written, oral practical and clinical examination Log Book
B- Perform the diagnostic tests/ laboratory experiments for dependence producing substances and drugs.		
C. Interpret the non invasive/invasive procedures/ experimental techniques and teaching plan for the Clinical Toxicology related subjects/ skills.		
D. Perform the non invasive/invasive procedures/ experiments techniques and teaching plan for the Clinical Toxicology related subjects/ skills.		
E. Write and evaluate Toxicological report.		
F. Perform the basic experiments in related basic sciences to be utilized in the research work:		
G. Use information technology to support decisions in common situations related to Toxicology		
H. Develop and carry out plans for performing procedures related to Clinical Toxicology.		

.I. Counsel and educate students, technicians and junior staff, in the lab about conditions related to identification of toxicological problems		
J. Share in providing health care services aimed solving health problems and better understanding of the normal structure and function.		

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(audit, logbook)	Log book and supervision Written & oral communication	Written, oral practical and clinical examination Log Book
B. Appraises evidence from scientific studies as researches, evidence based practice and internet updates.	Journal clubs Discussions in seminars	
C. participate in one audit or survey related to the course		
D. Perform data management including data entry and analysis.		
E. Facilitate learning of junior students and other health care professionals.		

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
F. Maintain ethically sound relationship with others (senior staff, colleagues).	-Observation and supervision -oral communication	Written, oral practical and clinical examination Log Book
G. Elicit information using effective nonverbal, explanatory, questioning, and writing skills.		

H. Provide information using effective nonverbal, explanatory, questioning, and writing skills.		
I. Work effectively with others as a member of a health care team or other professional group.		
J. Present a case in Clinical Toxicology		
K. Write a report in Clinical Toxicology		

Professionalism

ILOs	*Methods of teaching/ learning*	*Methods of Evaluation*
L. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society	-Observation -Senior staff experience	Written, oral practical and clinical examination Log Book Student survey
M. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices		
N. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		

Systems-Based Practice

ILOs	**Methods of teaching/ learning**	**Methods of Evaluation**
O. Work effectively in relevant health care delivery settings and systems.	-Observation -Senior staff experience	Log Book Student survey
P. Practice cost-effective health care and resource allocation that does not compromise quality of care.		
Q. Assist patients in dealing with system complexities.		

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

Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge	Intellectual	Practical skill	General Skills
-General Toxicology	A,B,E	A-C	A-Q	A-Q
-Corrosive toxicity	A,B,E	A-C	A-Q	A-Q
- Heavy metals toxicity	A-D	A--C	A-D	A-Q
- Volatile toxicity	A-E	A-C	A-E	A-Q
- Gaseous toxicity	A,B,E	A--C	A,B,E	A-Q
-Plant toxicity	A-D	A-C	A-D	A-Q
- Insecticides toxicity	A-E	A--C	A-E	A-Q
- Food Poisoning & Food additives Toxicity.	A,B,E	A-C	A,B,E	A-Q
- Antidepressant toxicity	A-D	A-C	A-D	A-Q
- Antihistaminic toxicity	A,B,E	A-C	A,B,E	A-Q
- Hydrocarbons toxicity	A-E	A-C	A-E	A-Q
- Vitamins toxicity	A,B,E	A-C	A,B,E	A-Q
- Designer drugs	A,B,E	A-C	A,B,E	A-Q
- Air pollution	A,B,E	A-C	A,B,E	A-Q
- Animal (Scorpion and Snake) toxicity	A-E	A-C	A-E	A-Q
- Drugs of abuse	A-E	A-C	A-E	A-Q

5. Course Methods of teaching/learning:

1. **Didactics: Lectures, tutorial,**
2. **Practical training**
3. **Case studies (problem solving).Demonstrations.**
4. **Seminars, scientific meeting.**
5. **Journal club.**
6. **Educational prescription.**
7. **Critical appraisal topics.**
8. **Observation & supervision**
9. **Discussion**
10. **Written and oral communication.**

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

1-Extra Didactic (lectures, seminars, tutorial) according to their needs

2-Extra training according to their needs

7. Course assessment methods:

i. Assessment tools:

1. Written examination
2. Oral exam
3. Practical exam
4. Objective structural assessment.
5. Logbook.
6. Record, review reports.

ii. Time schedule: 1 year

iii. Marks: 200 marks (100 for written +50 for oral +50 for practical)

8. List of references

i. Lectures notes

- Course notes.
- Staff members print out of lectures and/or CD copies.
- Principles of Forensic Medicine and Clinical Toxicology Book by Staff Members of the Department of Forensic Medicine and Clinical Toxicology -Assiut University.

ii. Essential books

- **Gossel, T. and Bricker, T. (1990):** Principles of Clinical Toxicology. 2nd edition, USA.
- Shannon, M. W., Borron, S. W., Burns, M. J., Haddad, L. M., & Winchester, J. F. (2007). Haddad and Winchester's clinical management of poisoning and drug overdose. Philadelphia: Saunders/Elsevier.
- 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.

iii. Recommended books

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- **Dart,R.C.(2004):** Medical Toxicology,1st edition, Lippincot Williams&Wilkins Inc., USA.
- **Ballantyne B., Marrs T. and Syversen T.(1999):**General and Applied Toxicology.2nd edition. MACMILLAN REFERENCE LTD.UK.

- **iv. Periodicals, Web sites, … etc**

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.

Legal Medicine.

Toxicology Letter.

9. Signatures

Course Coordinator: **ProfNagwaM. Ghandour**	**Head of the Department:** **Prof.** Randa Hussein Abd ElHady
Date:	**Date:**

Course 4: Forensic Medicine and ClinicalToxicology (Advanced)

- **Name of department:** ***Forensic Medicine and Clinical Toxicology***
- **Faculty of Medicine**
- **Assiut University**
- **2022-2023**

1. Course data

- **Unit Title: Forensic Medicine**
- **Unit code:** FMT210D
- **Speciality: Forensic Medicine and Clinical Toxicology.**
- **Number of credit points: Didactic 24 CP (20%) practical 96 CP (80%). Total 120CP (100%)**
- **Department (s) delivering the unit :** Department of Forensic Medicine & Clinical Toxicology - Faculty of Medicine- Assiut University- Assiut-EGYPT
- **Course coordinator:. Dr. Nagwa M. Ghandour**
- **Assistant coordinator (s): Associate professor;Nora Zidan**
  - To be assigned annually according to the approval of the Forensic Medicine and Clinical Toxicology Department council (annual notification will be send over to QAU and vice-Dean of post graduate and research affairs).
- **Date last reviewed: …**4-2022
  - **General requirements (prerequisites) if any :** -None
- **Requirements from the students to achieve course ILOs are clarified in the joining log book.**

Course 4 : Unit 1 Forensic Medicine

2. Unit Aims

1- To provide the candidate with active participation in
a) Review of history and circumstances of death.
b) Preparation of written descriptions of the gross findings in Forensic cases.
c) Development of an opinion regarding the cause of different deaths.

3. Intended learning outcomes (ILOs):

A-Knowledge and understanding

ILOs	*Methods of teaching/ Learning*	*Methods of Evaluation*
A-Describe common clinical conditions related to: -Personal identification of living and dead human bodies. - Examination of blood stains. - Examination of Hair & Fibers. - Medicolegal aspects of death and postmortem changes. - Death certificate. - General and special types of wounds. - Mechanical Asphyxia. - Medicolegal aspects of pregnancy and delivery. - Medicolegal aspects of abortion - Medicolegal aspects of infanticide - Medicolegal aspects of Child abuse. - Medicolegal aspects of Sexual crimes. - Artefacts in Postmortem examination. -Autopsy and Exhumation.	Didactic (lectures, seminars, tutorial) -Journal club, -Critically appraised topic,	Portfolios Procedure/stains Log book Oral exam Written exam

- Death associated with surgical procedures and Anesthesia. - Mass disaster.		
B-Mention the basics and principles essential to the unit topics.		
C- State update and evidence based Knowledge related to the unit.		
D-Memorize the facts and principles of the other relevant basic and clinically supportive sciences related to the unit topics.		
E-Mention the basic ethical and medicolegal principles relevant to the approach to the unit topics.		
F-Mention the basics of quality assurance to ensure good professional skills in his field.		
G-Mention the ethical and scientific principles of medical research involving human subjects.		
H. State the impact of common problems related to the field of Forensic on the society and how good practice can improve these problems.		

B. Intellectual outcomes

ILOs	*Methods of teaching/ Learning*	*Methods of Evaluation*
A- Apply the facts of basic sciences, which are appropriate to study history and circumstances of death , and clinically supportive sciences, which are appropriate for Preparation of written descriptions of the gross Findings.	Didactic (lectures) -Critically appraised topic, Educational	Portfolios Log book Oral exam Written Exam

	prescription	
B-Demonstrate an investigatory and analytic thinking (problem solving) approaches to conditions relevance to the cause of different deaths.		
C-Design and present audits, cases, and seminars in common problems related to Forensic medicine.		
D- Formulate management plans and alternative decisions in different situations in the field of the Forensic medicine.		

C. Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
A-perform the basic skills essential to the course: -Personal identification of living and dead human bodies. - Examination of blood stains. - Examination of Hair & Fibers. -Death and postmortem changes. - Death certificate. - General and special types of wounds. -Asphyxia. -Pregnancy and delivery. - Abortion -Infanticide - Child abuse - Sexual crimes. - Artefacts in Postmortem examination. -Autopsy and Exhumation. -Death associated with surgical procedures and Anesthesia.	- seminar -Direct observation of the practical work -Case Study	log book - Objective structure -Check list

- Mass disaster.		
B. use instruments and devices in evaluation and informed decisions about the diagnostic procedures for forensic medicine related conditions.		
C. Write and evaluate Death certificate		
D-Participate /attend different autopsies		
E. Use information technology to support decisions in common situations related to Forensic Medicine.		
F. Develop and carry out plans for performing experiments related to Forensic medicine.		
G.Counsel and educate students, technicians and junior staff, in the lab about conditions related to Forensic medicine; including handling of samples, specimens, safety and maintenance of laboratory equipments.		
H. Share in providing health care services aimed solving health problems and better understanding of the normal structure and function.		

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(audit, logbook)	-Log book and supervision -Written& oral communication -Journal clubs -Discussions in seminars -Scientific meetings participate in seminars	Log book Portfolios Procedure/case presentation
B. Appraises evidence from scientific studies.		
C. participate in one audit or survey related to the unit.		
D. Perform data management including data entry and analysis.		
E. Facilitate learning of junior students .		

Interpersonal and Communication Skills

ILOs	Methods of teaching/ Learning	Methods of Evaluation
F. Maintain ethically sound relationship with others (Senior Stuff and Colleagues).	Observation and supervision -Written & oral communication	Simulation Record review Log Book
G. Elicit information using effective nonverbal, explanatory, questioning, and writing skills.		
H. Provide information using effective nonverbal, explanatory, questioning, and writing skills.		
I. Work effectively with others.		
J. Present a case related to forensic medicine		
K. Write death certificate		

Professionalism

ILOs	*Methods of teaching/ Learning*	*Methods of Evaluation*
L. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society	-Observation -Senior staff experience	1.Objective structured practical examination 2.Student survey
M. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices		
N. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		

Systems-Based Practice

ILOs	Methods of teaching/ Learning	Methods of Evaluation
O. Work effectively in relevant health care delivery settings and systems.	-Observation -Senior staff experience	-Log book Student Survey.
P. Practice cost-effective health care and resource allocation that does not compromise quality of care.		
Q. Assist patients in dealing with system complexities.		

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

Time Schedule: Second part

Topic	Covered ILOs			
	Knowledge	Intellectual	Practical skill	General Skills
-Personal identification of living and dead human bodies.	A, H	A-C	A-Q	A-Q
-Examination of blood stains.	A-C	A-C	A-D	A-Q
- Examination of Hair & Fibers.	A-D	A-C	A-E	A-Q
-Medicolegal aspects of death and postmortem changes.	A-E	A-C	A-D	A-Q
-Death certificate.	A-E	A-C	A-D	A-Q
-General and special types of wounds.	A-D	A-C	A-E	A-Q
- Mechanical Asphyxia.	A,D	A-C	A,B,E	A-Q
-Medicolegal aspects of pregnancy and delivery.	A-C	A-C	A-D	A-Q
-Medicolegal aspects of abortion.	A-H	A-C	A-E	A-Q
-Medicolegal aspects of infanticide	A,B,E	A-C	A,B,E	A-Q
-Medicolegal aspects of Child abuse.	A,E	A-C	A-D	A-Q
-Medicolegal aspects of Sexual crimes.	A-E	A-C	A-E	A-Q
-Postmortem Artefacts	A,E	A-C	A,B,E	A-Q
-Autopsy and Exhumation.	A-E	A-C	A-D	A-Q
- Death associated with surgical procedures and Anesthesia.	A-C	A-C	A-D	A-Q
-Mass disaster	A-D	A-C	A-E	A-Q

Course 4: Unit 2 Trauma and Infirmity

2. Unit Aims

1-Become familiar with the different types of wounds and infirmity.
2-The candidate is able to acquire the basic knowledge and skills that are essential to evaluate different aspects of trauma and permanent infirmity.

3. Intended learning outcomes (ILOs):

A-Knowledge and understanding

ILOs	*Methods of teaching/ Learning*	*Methods of Evaluation*
A-Describe common clinical conditions related to: - Definition of infirmity and determination of its percentage -Types of trauma. - Types and classification of infirmity (in different organs). - Law and infirmity. - Differences between infirmity and disfigurement. -Infirmity reports. -General and special types of wounds. - Head injuries. - Firearm injuries & explosions. - Injuries due to physical agents including barotrauma. - Medicolegal aspects of transportation injuries. <u>Medical Ethics:</u> - Obligation of physicians towards	Didactic (lectures, seminars, tutorial) -Journal club, -Critically appraised topic, -Educational -prescription -Demonstrations	Portfolios Procedure Log book Oral exam Written exam

patients, colleagues, community and profession. - Types and items of consent and professional secrecy. -Ethical principles in medical research. -Malpractice and Medical responsibility. - Medicolegal aspects of organ transplantation, intersex, euthanasia, and assisted reproductive techniques.		
B-Mention the basics and principles essential to the unit.		
C-State update and evidence based Knowledge related to the unit.		
D-Memorize the facts and principles of the other relevant basic and clinically supportive sciences related to Forensic including: Infirmity.		
E.Mention the basic ethical and medicolegal principles relevant to the forensic.		
F.Mention the basics of quality assurance to ensure good professional skills in his field.		
G.Mention the ethical and scientific principles of medical research.		
H.State the impact of common problems related to the field of trauma and infirmity, and patient safety on the society and how good practice can improve these problems.		

B. Intellectual outcomes

ILOs	*Methods of teaching/ Learning*	*Methods of Evaluation*
A-Correlates the facts of relevant basic and clinically supportive sciences with conditions and diseases of relevance to forensic.	Didactic (lectures) -Critically appraised topic, -Educational –prescription	Portfolios Log book Oral exam Written exam
B-Demonstrate an investigatory and analytic thinking (problem solving) approaches to conditions relevance to the unit.		
C-Design and present audits, cases, seminars in common problems related to the unit.		

C. Practical skills

ILOs	**Methods of teaching/ learning**	**Methods of Evaluation**
A-perform the basic skills essential to the unit.	- seminar -Direct observation of the practical work -Case study	log book - Objective structure -Check list
B. use instruments and devices in evaluation of infirmity		
C. Evaluate, calculate and write the Percent of infirmity.		
D. Perform the basic experiments in related basic sciences to be utilized in the research work.		
E. Use information technology to support decisions in common situations related to trauma		
.F. Counsel and educate students and junior staff about conditions related to trauma and infirmity evaluation.		
G. Share in providing health care services aimed solving health problems and better understanding.		

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(audit, logbook)	Log book and supervision Written & oral communication Journal clubs Discussions in seminars Scientific meetings participate in seminars	Log book Portfolios Procedure/case presentation
B. Appraises evidence from scientific studies.		
C. participate in one audit or survey related to the unit.		
D. Perform data management including data entry and analysis.		
E. Facilitate learning of junior students .		

Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
F. Maintain ethically sound relationship with others.	Observation & supervision	Simulation Record review report
G. Elicit information using effective nonverbal, explanatory, questioning, and writing skills.		
H. Provide information using effective nonverbal, explanatory, questioning, and writing skills.		
I. Work effectively with others as a member of a health care team or other professional group.		
J. Present a case.		
K. Write an infirmity report in Forensic cases		

Professionalism

ILOs	*Methods of teaching/ Learning*	*Methods of Evaluation*
L. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society	Observation & supervision Didactic , seminars, tutorial Educational prescription	1.Objective structured practical examination 2.Student survey
M. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices		
N. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		

Systems-Based Practice

ILOs	**Methods of teaching/ Learning**	**Methods of Evaluation**
O. Work effectively in relevant health care delivery settings and systems.	Observation & supervision	1-student survey 2.portfolios
P. Practice cost-effective health care and resource allocation that does not compromise quality of care.		
Q. Assist patients in dealing with system complexities.		

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

Time Schedule: Second part

Topic	Covered ILOs			
	Knowledge	**Intellectual**	**Practical skill**	**General Skills**
- Definition of infirmity and determination of its percentage.	A,B,E	A-C	A-D	A-Q
-Types of trauma.	A-G	A-C	A-D	A-Q
-Types and classification of infirmity (in different organs)				
- Law and infirmity	A-G	A-C	A-E	A-Q
- Differences between infirmity and disfigurement.	A,B,E	A-C	A,B,E	A-Q
-Infirmity reports.	A-G	A-C	A-E	A-Q
-General and special types of wounds.	A-G	A-C	A-E	A-Q
- Head injuries.	A,B,E	A-C	A,B,E	A-Q
- Firearm injuries & explosions.	A-G	A-C	A-E	A-Q
- Injuries due to physical	A,B,E	A-C	A,B,E	A-Q

agents including barotrauma.				
- Medicolegal aspects of transportation injuries.	A,B,E	A-C	A,B,E	A-Q
<u>Medical Ethics:</u> - Obligation of physicians towards patients, colleagues, community and profession.	A-G	A-C	A-E	A-Q
-Types and items of consent and professional secrecy.	A,D	A-C	A-D	A-Q
-Ethical principles in medical research.	A-C	A-C	A-E	A-Q
-Malpractice and Medical responsibility.	A-G	A-C	A-E	A-Q
Medicolegal aspects of organ transplantation, intersex, euthanasia, and assisted reproductive techniques	A-E	A-C	A-D	A-Q

Course 4: Unit 3 Clinical Toxicology " (Advanced I)

2. Unit Aims

1-Provide an extensive, compact review “need to know” of toxicology management for all health providers
2- Prepare Specialists in Poison Information
3- To provide the candidate with active participation in
a) Review of medical history and circumstances of death in toxicological cases.
b) Development of an opinion regarding the cause of different toxicological deaths.

3. Intended learning outcomes (ILOs):

A-Knowledge and understanding

ILOs	*Methods of teaching/ Learning*	*Methods of Evaluation*
- A-Describe common clinical conditions related to: - -Clinical management of toxicological emergencies including General toxicology and toxidromes. -Toxicokeinetics: including (Physiologic, biochemical and pharmacological principles of poisons). - Diagnostic Procedures. - Laboratory ethics	Didactic (lectures, seminars, tutorial) -Journal club, -Critically appraised topic, Educational prescription Demonstrations	Portfolios Procedure Log book Oral exam Written exam
B-Mention the basics and principles essential to clinical toxicology.		
C-State update and evidence based Knowledge related to the unit.		

D-Memorize the facts and principles of the other relevant basic and clinically supportive sciences related to clinical toxicology.		
E.Mention the basic ethical and medicolegal principles relevant to clinical toxicology.		
F.Mention the basics of quality assurance to ensure good professional skills in his field.		
G.Mention the ethical and scientific principles of medical research.		
H.State the impact of common problems related to the field of general toxicology, and patient safety on the society and how good practice can improve these problems.		

B. Intellectual outcomes

ILOs	*Methods of teaching/ Learning*	*Methods of Evaluation*
A-Correlates the facts of relevant basic and clinically supportive sciences with conditions and diseases of relevance to clinical toxicology**.**	Didactic (lectures) -Critically appraised topic, Educational prescription	Portfolios Log book Oral exam Written exam
B-Demonstrate an investigatory and analytic thinking (problem solving) approaches to conditions relevance to clinical toxicology.		
C-Design and present audits, cases, seminars in common problems related to clinical toxicology.		

C. Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
A-perform the basic skills essential to the clinical toxicology.	- seminar -Direct observation of the practical work -Case study	log book - Objective structure -Check list
B. use instruments and devices in evaluation of poisoning.		
C. Write and evaluate poisoning reports.		
D. Perform the basic experiments in related basic sciences to be utilized in the research work.		
E. Use information technology to support decisions in common situations related to poisoning.		
.F. Counsel and educate students and junior staff about conditions related to evaluation of poisoning cases.		
G. Share in providing health care services aimed solving health problems and better understanding of the normal structure and function.		

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(audit, logbook)	Log book and supervision Written & oral communication Journal clubs Discussions in seminars Scientific meetings participate in seminars	Log book Portfolios Procedure/case presentation
B. Appraises evidence from scientific studies.		
C. Participates in one audit or survey related to clinical toxicology.		
D. Perform data management including data entry and analysis.		
E. Facilitate learning of junior students and other health care professionals.		

Interpersonal and Communication Skills

ILOs	Methods of teaching/ Learning	Methods of Evaluation
F. Maintain ethically sound relationship with others.	Observation & supervision	Simulation Record review (report
G. Elicit information using effective nonverbal, explanatory, questioning, and writing skills.		
H. Provide information using effective nonverbal, explanatory, questioning, and writing skills.		
I. Work effectively with others as a member of a health care team or other professional group.		
J. Present a case of poisoning.		
K. Write a report on poisoning case.		

Professionalism

ILOs	*Methods of teaching/ Learning*	*Methods of Evaluation*
L. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society	Observation & supervision Didactic , seminars, tutorial Educational prescription	1.Objective structured practical examination 2.Student survey
M. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices		
N. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		

Systems-Based Practice

ILOs	**Methods of teaching/ Learning**	**Methods of Evaluation**
O. Work effectively in relevant health care delivery settings and systems.	Observation & supervision	1-student survey 2.portfolios
P. Practice cost-effective health care and resource allocation that does not compromise quality of care.		
Q. Assist patients in dealing with system complexities.		

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

Time Schedule: Second part

Topic	Covered ILOs			
	Knowledge	**Intellectual**	**Practical skill**	**General Skills**
-Clinical management of toxicological emergencies including general toxicology and toxidromes.	A,B,E	A-C	A-D	A-Q
-Toxicokeinetics: including (Physiologic, biochemical and pharmacological principles of poisons).	A-G	A-C	A-D	A-Q
- Diagnostic Procedures& Laboratory ethics.	A-G	A-C	A-E	A-Q

Course 4: Unit 4 Clinical Toxicology " (Advanced II)

2. Unit Aims

1-To provide the candidate with active participation in:
a) Review of medical history and circumstances of death.
b) Preparation of written descriptions of the gross and microscopic Findings.
c) Development of an opinion regarding the cause of different toxicological deaths.

3. Intended learning outcomes (ILOs):

A-Knowledge and understanding

ILOs	*Methods of teaching/ Learning*	*Methods of Evaluation*
A-Describe common clinical conditions related to - Postmortem Toxicology. -Selection, collection, preservation and security of toxicological samples. -Common methods in Postmortem Toxicology. -Interpretation of Postmortem Drug Level. -Postmortem Redistribution of Drugs. -Postmortem pictures of death from some poisons:(Co,Alcohols,heavy metals,corrosives ,Cyanides,ethylene glycol) -Postmortem pictures of death from narcotic and hallucinogen drugs.	Didactic (lectures, seminars, tutorial) -Journal club, -Critically appraised topic, Educational prescription Demonstrations	Portfolios Procedure Log book Oral exam Written exam

-Postmortem pictures of death from Medicines (Analgesics,Antidepressants,Paracetamol,Barbiturates and Insulin).		
B-Mention the basics and principles essential to the unit.		
C-State update and evidence based Knowledge related to the unit.		
D-Memorize the facts and principles of the other relevant basic and clinically supportive sciences related to the unit.		
E.Mention the basic ethical and medicolegal principles relevant to the unit.		
F.Mention the basics of quality assurance to ensure good professional skills in his field.		
G.Mention the ethical and scientific principles of medical research		
H.State the impact of common problems related to the field of postmortem toxicology and patient safety on the society and how good practice can improve these problems.		

B. Intellectual outcomes

ILOs	*Methods of teaching/ Learning*	*Methods of Evaluation*
A-Correlates the facts of relevant basic and clinically supportive sciences with conditions of relevance to clinical toxicology.	Didactic (lectures) -Critically appraised topic, Educational prescription	Portfolios Log book Oral exam Written exam
B-Demonstrate an investigatory and analytic thinking (problem solving) approaches to conditions relevance to the postmortem toxicology		
C-Design and present audits, cases, and seminars in common problems related to the unit.		

C. Practical skills

ILOs	**Methods of teaching/ learning**	**Methods of Evaluation**
A-perform the basic skills essential to the unit.	- seminar -Direct observation of the practical work -Case study	log book - Objective structure -Check list
B. use instruments and devices in evaluation of cases of clinical toxicology.		
C. Write and evaluate reports on clinical toxicology		
D. Perform the basic experiments in related basic sciences to be utilized in the research work.		
E. Use information technology to support decisions in common situations related to poisoning		
.F. Counsel and educate students and junior staff about conditions related to postmortem toxicology.		

G. Share in providing health care services aimed solving health problems and better understanding of the normal structure and function.		

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(audit and logbook)	Log book and supervision Written & oral communication Journal clubs Discussions in seminars Scientific meetings participate in seminars	Log book Portfolios Procedure/case presentation
B. Appraises evidence from scientific studies.		
C. participate in one audit or survey related to the unit.		
D. Perform data management including data entry and analysis.		
E. Facilitate learning of junior students and other health care professionals.		

Interpersonal and Communication Skills

ILOs	Methods of teaching/ Learning	Methods of Evaluation
F. Maintain ethically sound relationship with others.	Observation & supervision	Simulation Record review (report
G. Elicit information using effective nonverbal, explanatory, questioning, and writing skills.		
H. Provide information using effective nonverbal, explanatory, questioning, and writing skills.		
I. Work effectively with others as a member of a health care team or other professional group.		
J. Present a case in postmortem toxicology		
K. Write a report in postmortem toxicology		

Professionalism

ILOs	*Methods of teaching/ Learning*	*Methods of Evaluation*
L.Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society	Observation & supervision Didactic , seminars, tutorial Educational prescription	1.Objective structured practical examination 2.Student survey
M.Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices		
N.Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		

Systems-Based Practice

ILOs	Methods of teaching/ Learning	Methods of Evaluation
O.Work effectively in relevant health care delivery settings and systems.	Observation & supervision	1-student survey 2.portfolios
P.Practice cost-effective health care and resource allocation that does not compromise quality of care.		
Q.Assist patients in dealing with system complexities.		

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

Time Schedule: Second part

Topic	Covered ILOs			
	Knowledge	Intellectual	Practical skill	General Skills
- Postmortem Toxicology.	A,B,E	A-C	A-D	A-Q
-Selection, collection, preservation and security of toxicological samples.	A-G	A-C	A-D	A-Q
-Common methods in Postmortem Toxicology.	A-G	A-C	A-E	A-Q
- Interpretation of Postmortem Drug Level.	A,B,E	A-C	A,B,E	A-Q
-Postmortem Redistribution of Drugs.	A-G	A-C	A-D	A-Q
-Postmortem pictures of death from some poisons:(Co,Alcohols,heavy metals,corrosives ,Cyanides,ethylene glycol)	A,B,E	A-C	A-D	A-Q
-Postmortem pictures of death from narcotic and hallucinogen drugs.	A-G	A-C	A-D	A-Q
-Postmortem pictures of death from Medicines (Analgesics,Antidepressants,Para cetamol,Barbiturates and Insulin)	A-G	A-C	A-E	A-Q

5. Methods of teaching/learning:

1. **Didactics: Lectures, tutorial,**
2. **Practical training**
3. **Case studies (problem solving).Demonstrations.**
4. **Seminars, scientific meeting.**
5. **Journal club.**
6. **Educational prescription.**
7. **Critical appraisal topics.**
8. **Observation & supervision**
9. **Discussion**
10. **Written and oral communication**

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

1-Extra Didactic (lectures, seminars, tutorial) according to their needs

2-Extra training according to their needs

7. Assessment methods:

i. Assessment tools:

- Written Examination; including MCQ – A standardized examination using multiple-choice

questions (MCQ). The in-training examination and written board examinations are examples.

- Oral Examination– Uses structured realistic cases and patient case protocols in an oral examination to assess clinical decision-making.
- Case /problems – assess use of knowledge in diagnosing or treating patients or evaluate procedural skills**.**
- Logbook**.**
- Simulation.
- Practical exam.

ii. Time schedule: 3 years

iii. Marks: 1200 MARKS (600 for written+300 for oral + 300 for practical)

8. List of references

i. Lectures notes

- Course notes.
- Staff members print out of lectures and/or CD copies.
- Principles of Forensic Medicine and Clinical Toxicology Book by Staff Members of the Department of Forensic Medicine and Clinical Toxicology -Assiut University.

ii. Essential books

- **Gossel, T. and Bricker, T. (1990):** Principles of Clinical Toxicology. 2nd edition, USA.
- **Hadad,L., Shannon,M. and Winchester,J.(1998):** Clinical Management of Poisoning and drug overdose.3rd edition,Saunders Company,USA.
- Shannon, M. W., Borron, S. W., Burns, M. J., Haddad, L. M., & Winchester, J. F. (2007). Haddad and Winchester's clinical management of poisoning and drug overdose. Philadelphia: Saunders/Elsevier.

- 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

- **Gold Frank,L., Flwenbaum,N., Lewin,N., Weisman ,R., Howland,M. and Hoffman, R. (2002):**Toxicological Emergency.7th edition, Mc GrawHill Company, USA.
- **Dart,R.C.(2004):** Medical Toxicology,1st edition, Lippincot Williams&Wilkins Inc., USA.
- **Ballantyne B., Marrs T. and Syversen T.(1999):**General and Applied Toxicology.2nd edition. MACMILLAN REFERENCE LTD.UK.

- **Krishan-Vig (2006):** Text Book of Forensic Medicine, Principles and practice, 3rd edition, Elsevier Publisher Inc., USA.
- **Veatch,R,M.(1997):**Medical ethics.2nd edition, Jones&Barlett Publishers,Sudbury Massauchutts,USA.
- **Karch S.**(2008): Postmortem Toxicology of Abused Drugs. CRC Press.Taylor & Francis Group.U.S.A.
- **Saukko, P. and Knight, B.(2015):** Knight's Forensic Pathology,4rd edition, Arlond Company, U.K., and Oxford University Press Inc.,USA.

iv. Periodicals, Web sites, … etc

- Journals of all Egyptian Universities of Forensic Medicine and Clinical Toxicology.
- Websites:

http://library.med.utah.edu/WebPath/FORHTML/FORIDX.html
http://www.bloodspatter.com/BPATutorial.htm
http://www.forensicmed.co.uk/

- All International Journals of Forensic Medicine and Clinical Toxicology, which are available in the university network at www.sciencedirect.com. :. As:

Forensic Science International Journal.
Toxicology Letter.

9. Signatures

Course Coordinator: **Prof.Dr. Nagwa M. Ghandour**	**Head of the Department:** **Prof.** Dr. Randa Hussein Abd El Hady
Date:	**Date:**

4. First and second parts Courses contents (topic s/modules/rotation)
Overall Courses Matrices

Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge A	**Intellectual B**	**Practical skill C**	**General Skills D**
Course 1: Forensic Pathology	A-G	A-C	A-G	A-Q
Course 2: Forensic Chemistry	A-E	A-C	A-F	A-Q
Course 3:Clinical Toxicology (Basic)	A-G	A-D	A-J	A-Q
Course 4: Forensic Medicine and Clinical Toxicology (Advanced) Unit 1 Forensic Medicine	A-H	A-D	A-H	A-Q
Unit 2 Trauma and Infirmity	A-H	A-C	A-G	A-Q
Unit 3 Clinical Toxicology (Advanced I)	A-H	A-C	A-G	A-Q
Unit 4 Clinical Toxicology (AdvancedI I)	A-H	A-C	A-G	A-Q

ANNEX 2
Program Academic Reference Standards (ARS)

1- Graduate attributes for master degree in Forensic Medicine and Clinical Toxicology

***The Graduate (after residence training and master degree years of study) must*:**

1- Have the capability to be a scholar, understanding and applying basics, methods and tools of scientific research and medical audit in the chosen field of Forensic Medicine and Clinical Toxicology.

2- Appraise and utilise scientific knowledge to continuously update and improve clinical practice in related Forensic Medicine and Clinical Toxicology.

3- Acquire sufficient medical knowledge in the basic biomedical, clinical, behavioural and clinical sciences, medical ethics and medical jurisprudence and apply such knowledge in patient care in the field of Forensic Medicine and Clinical Toxicology.

4- Dealing with common problems and health promotion using updated information in the field of Forensic Medicine and Clinical Toxicology.

5- Identify and share to solve health problems in his Forensic Medicine and Clinical Toxicology.

6- Acquire all competencies –including the use of recent technologies- that enable him to provide safe, scientific, and ethical care including update use of new technology in the Forensic Medicine and Clinical Toxicology field.

7- Demonstrate interpersonal and communication skills that ensure effective information exchange with other health professions, the scientific community, junior students and the public.

8- Function as supervisor, and trainer in relation to colleagues, medical students and other health professions.
9- Acquire decision making capabilities in different situations related to his field of practice.
10- Show responsiveness to the larger context of the related 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.
11- Be aware of public health and health policy issues and share in system-based improvement of his practice and related health care.
12- Show appropriate attitudes and professionalism.
13- Demonstrate skills of lifelong learning and maintenance of competence and ability for continuous medical education and learning in subsequent stages in the Forensic Medicine and Clinical Toxicology or one of its subspecialties.

2- Competency based Standards for Forensic Medicine and Clinical Toxicology

2.1- Knowledge and understanding

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

2-1-A- Established basic, biomedical, clinical, epidemiological and behavioral sciences related to the Forensic Medicine and Clinical Toxicology.

2-1-B- The relation between practice in the Forensic Medicine and Clinical Toxicology and the welfare of society.

2-1-C- Up to date and recent developments in common problems related to the field of Forensic Medicine and Clinical Toxicology.

2-1-D- Ethical and medicolegal principles relevant to practice in the Forensic Medicine and Clinical Toxicology field.

2-1-E -Quality assurance principles related to the good medical practice in the speciality field.

2-1-F- Ethical and scientific basics of medical research.

2.2- Intellectual skills:

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

2-2-A- Correlation of different relevant sciences in the problem solving and management of common problems of the Forensic Medicine and Clinical Toxicology.

2-2-B- Problem solving skills based on data analysis and evaluation (even in the absence of some) for common situations related to Forensic Medicine and Clinical Toxicology.

2.2- C- Demonstrating systematic approach in studding common themes or problems relevant to the Forensic Medicine and Clinical Toxicology field.

2-2-D- Making alternative decisions in different situations in the field of the Forensic Medicine and Clinical Toxicology.

2.3- Clinical skills/Practical skills

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

2-3-A - Provide practical and or laboratory services that can help patient care, solving health problems and better understanding of the normal structure and function.

2-3-B- Demonstrate practical / laboratory skills relevant to Forensic Medicine and Clinical Toxicology.

2-3- C- Write and comment on reports for situations related to the field of Forensic Medicine and Clinical Toxicology.

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- Demonstrate practice-based learning and improvement skills that involves investigation and evaluation of their own practice, appraisal and assimilation of scientific evidence, improvements in provided services and risk management.

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

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

- ***Competency-based objectives for interpersonal and communication Skills***

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

- ***Competency-based objectives for Professionalism***

2-4-E- Demonstrate professionalism behaviors, 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 academic services and the ability to effectively use system resources to provide care that is of optimal value.
2-4-G- Demonstrate skills of effective time management.
2-4-H- 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 Master Degree 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					

Annex 4, Glossary of Master Degree doctors 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 MSc 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 MSc doctor's performance on checklists and provide feedback for history taking, physical examination, and communication skills. Physicians may also rate the MSc doctor's performance.
- Objective Structured Clinical Examination (OSCE) – A series of stations with standardized tasks for the MSc doctors to perform. Standardized patients and other assessment methods often are combined in an OSCE. An observer or the standardized patient may evaluate the MSc doctors.
- Procedure or Case Logs – MSc 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 a MSc 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 – MSc doctors, faculty, nurses, clerks, and other clinical staff evaluate MSc doctors from different perspectives using similar rating forms.
- ❖ Portfolios – A portfolio is a set of project reports that are prepared by the MSc doctors to document projects completed during the MSc 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 – MSc 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 MSc 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 5 contains evaluation templates and reports (Joined in the departmental folder).

Annex 6,
Program Correlations:

مصفوفة توافق المعايير القومية القياسية العامة لبرامج الماجستير مع المعايير الأكاديمية المعتمدة من كلية الطب □ جامعة أسيوط لدرجة الماجستير في الطب الشرعي و السموم الإكلينيكية

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

1- Graduate attributes

NAQAAE General ARS for Postgraduate Program	Faculty ARS
١- إجادة تطبيق أساسيات و منهجيات البحث العلمي و استخدام أدواته المختلفة	1- Have the capability to be a scholar, understanding and applying basics, methods and tools of scientific research and medical audit in forensic medicine and clinical toxicology
٢-تطبيق المنهج التحليلي و استخدامه في مجال التخصص	2- Appraise and utilise scientific knowledge to continuously update and improve clinical practice in forensic medicine and clinical toxicology
٣-تطبيق المعارف المتخصصة و دمجها مع المعارف ذات العلاقة في ممارسته المهنية	3- Acquire sufficient medical knowledge in the basic biomedical, clinical, behavioural and clinical sciences, medical ethics and medical jurisprudence and apply such knowledge in forensic medicine and clinical toxicology
٤-إظهار وعيا بالمشاكل الجارية و الرؤى الحديثة في مجال التخصص	4- Dealing with common problems and health promotion using updated information in forensic medicine and clinical toxicology
٥-تحديد المشكلات المهنية و إيجاد حلو لا لها	5- Identify and share to solve health problems in his speciality
٦-إتقان نطاق مناسب من المهارات المهنية المتخصصة، و استخدام الوسائل التكنولوجيةالمناسبة بما يخدم ممارسته المهنية	6- Acquire all competencies that enable him to provide safe, scientific, ethical care including update use of new technology in forensic medicine and clinical toxicology

1- Graduate attributes (Continuous)

NAQAAE General ARS for Postgraduate Program	Faculty ARS
٧-التواصل بفاعلية و القدرة على قيادة فرق العمل	7- Demonstrate interpersonal and communication skills that ensure effective information exchange with other health professions, the scientific community, junior students and the public. 8- Function as supervisor, and trainer in relation to colleagues, medical students and other health professions.
٨-اتخاذ القرار في سياقات مهنية مختلفة	9- Acquire decision making capabilities in different situations related to his field of practice.
٩- توظيف الموارد المتاحة بما يحقق أعلي استفادة و الحفاظ عليها	10- Show responsiveness to the larger context of the related 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.
١٠-إظهار الوعي بدوره في تنمية المجتمع و الحفاظ على البيئة في ضوء المتغيرات العالمية و الإقليمية	11- Be aware of public health and health policy issues and share in system-based improvement of his practice and related health care.
١١-التصرف بما يعكس الالتزام بالنزاهة و المصداقية و الالتزام بقواعد المهنة	12- Show appropriate attitudes and professionalism.
١٢-تنمية ذاته أكاديميا و مهنيا و قادرا علي التعلم المستمر	13- Demonstrate skills of lifelong learning and maintenance of competence and ability for continuous medical education and learning in subsequent stages in the speciality or one of its subspecialties.

2-Academic standard

NAQAAE General ARS for Postgraduate Program	Faculty ARS
٢-١-أ-النظريات و الأساسيات المتعلقة بمجال التعلم وكذا في المجالات ذات العلاقة.	2.1. A - Established basic, biomedical, clinical, epidemiological and behavioral sciences related forensic medicine and clinical toxicology
٢-١-ب-التأثير المتبادل بين الممارسة المهنية وانعكاسها علي البيئة.	2.1. B- The relation between practice in the forensic medicine and toxicology and the welfare of society.
٢-١-ج-التطورات العلمية في مجال التخصص.	2.1. C- Up to date and recent developments in common problems related to the field of forensic medicine and clinical toxicology
٢-١-د-المبادئ الأخلاقية و القانونية للممارسة المهنية في مجال التخصص.	2.1. D- Ethical and medicolegal principles relevant to practice in forensic medicine and clinical toxicology
٢-١-هـ- مبادئ و أساسيات الجودة في الممارسة المهنية في مجال التخصص	2.1. E- Quality assurance principle related to the good medical practice in the forensic medicine and clinical toxicology
٢-١-و- أساسيات وأخلاقيات البحث العلمي	2.1. F- Ethical and scientific basics of medical research.

2-Academic standards (Continuous)

NAQAAE General ARS for Postgraduate Program	Faculty ARS
٢-٢-أ- تحليل و تقييم المعلومات في مجال التخصص و القياس عليها لحل المشاكل	2.2. A- Correlation of different relevant sciences in the problem solving and management of common problems of the forensic medicine and clinical toxicology 2.2. B- Problem solving skills based on data analysis and evaluation (even in the absence of some) for common situations related to forensic medicine and clinical toxicology
٢-٢-ب- حل المشاكل المتخصصة مع عدم توافر بعض المعطيات	2.2. B- Problem solving skills based on data analysis and evaluation (even in the absence of some) for common situations related to forensic medicine and clinical toxicology
٢-٢-ج- الربط بين المعارف المختلفة لحل المشاكل المهنية	2.2. A- Correlation of different relevant sciences in the problem solving and management of common problems of the forensic medicine and clinical toxicology
٢-٢-د- إجراء دراسة بحثية و /أو كتابة دراسة علمية منهجية حول مشكلة بحثية	2.2. C- Demonstrating systematic approach in studding common themes or problems relevant to forensic medicine and clinical toxicology
٢-٢هـ- تقييم المخاطر في الممارسات المهنية في مجال التخصص	2.4. A- Demonstrate practice-based learning and improvement skills that involves investigation and evaluation of their own practice, appraisal and assimilation of scientific evidence, improvements in provided services and

	risk management.
٢-٢و - التخطيط لتطوير الأداء في مجال التخصص	2.4. A- Demonstrate practice-based learning and improvement skills that involves investigation and evaluation of their own practice, appraisal and assimilation of scientific evidence, improvements in provided services and risk management.

2-Academic standards (Continuous)

NAQAAE General ARS for Postgraduate Program	Faculty ARS
٢-٢-ز- اتخاذ القرارات المهنية في سياقات مهنية متنوعة	2.2. D- Making alternative decisions in different situations in the field of forensic medicine and clinical toxicology
٢-٣-أ- إتقان المهارات المهنية الأساسية و الحديثة في مجال التخصص	2.3.A- Provide practical and or laboratory services that can help patient care ,solving health problems and better understanding of the normal structure and function. 2.3. B- Demonstrate practical / laboratory skills relevant to that forensic medicine and clinical toxicology
٢-٣-ب- كتابة و تقييم التقارير المهنية	2.3. C- Write and comment on reports for situations related to the field of forensic medicine and clinical toxicology
٢-٣-ج- تقييم الطرق و الأدوات القائمة في مجال التخصص	2.3.A- Provide practical and or laboratory services that can help patient care ,solving health problems and better understanding of the normal structure and function. 2.3. B- Demonstrate practical / laboratory skills relevant to forensic medicine and clinical toxicology

2-Academic standards (<u>Continuous)</u>

NAQAAE General ARS for Postgraduate Program	Faculty ARS
٢-٤-أ-التواصل الفعال بأنواعه المختلفة	2.4. D- Demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, lab technical staff and other health professionals.
٢-٤-ب- استخدام تكنولوجيا المعلومات بما يخدم الممارسة المهنية	2.4. A- Demonstrate Practice-Based learning and Improvement skills that involves investigation and evaluation of their own practice, appraisal and assimilation of scientific evidence, improvements in provided services and risk management. 2.4. B- Use all information sources and technology to improve his practice.
٢-٤-ج- التقييم الذاتي وتحديد احتياجاته التعلمية الشخصية	2.4. A- Demonstrate Practice-Based learning and Improvement skills that involves investigation and evaluation of their own practice, appraisal and assimilation of scientific evidence,

	improvements in provided services and risk management. 2.4. B- Use all information sources and technology to improve his practice. 2.4. E-Demonstrate Professionalism behaviors, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

2-Academic standards (<u>Continuous)</u>

NAQAAE General ARS for Postgraduate Program	Faculty ARS
٢-٤-د- استخدام المصادر المختلفة للحصول على المعلومات و المعارف	2.4. A- Demonstrate Practice-Based learning and Improvement skills that involves investigation and evaluation of their own practice, appraisal and assimilation of scientific evidence, improvements in provided services and risk management.
٢-٤-هـ- وضع قواعد ومؤشرات تقييم أداء الآخرين	2.4. C- Demonstrate skills of teaching and evaluating others.
٢-٤-و- العمل في فريق ، وقيادة فرق في سياقات مهنية مختلفة	2.4. F- Demonstrate an awareness of and responsiveness to the larger context and system of health care and academic services and the ability to effectively use system resources to provide care that is of optimal value.
٢-٤-ز- إدارة الوقت بكفاءة	2.4. G- Demonstrate skills of effective time management
٢-٤-ح- التعلم الذاتي و المستمر	2.4. H- Demonstrate skills of self and continuous learning.

II- Comparison between ARS and ILOS for master degree in Forensic medicine and Clinical toxicology.

(ARS)	(ILOs)
2-1- Knowledge and understanding **2-1-A-** Established basic, biomedical, clinical, epidemiological and behavioral sciences related to the forensic medicine and clinical toxicology .	***2-1- Knowledge and understanding*** **2-1-A-** Explain the essential facts and principles of relevant basic sciences including, Forensic pathology and Forensic Chemistry, related to Forensic medicine and clinical toxicology **2-1-B-** Mention essential facts of clinical supportive sciences including Clinical toxicology related to forensic medicine and clinical toxicology . **2-1-C-** Demonstrate sufficient knowledge of the main subjects including toxicology related to forensic medicine and clinical toxicology
2-1-B The relation between practice in the speciality and the welfare of society.	**2-1-H-** State the impact of common problems related to the field of speciality on the society and how good practice can improve these problems.
2-1-C- Up to date and recent developments in commo problems related to the field c forensic medicine and clinical toxicology	**2-1-C-** Demonstrate sufficient knowledge of the main subjects. related to forensic medicine and clinical toxicology **2-1-D-** Give the recent and

	update developments in the most important themes related to forensic medicine and clinical toxicology
2-1-D- Ethical and medicolegal principles relevant to practice in the forensic medicine and clinical toxicology field.	**2-1-E-** Mention the basic ethical and medicolegal principles that should be applied in practice and are relevant to the field of forensic medicine and clinical toxicology
2-1-E-Quality assurance principles related to the good medical practice in the forensic medicine and clinical toxicology field.	**2-1-F-** Mention the basics and standards of quality assurance to ensure good practice in the field of forensic medicine and clinical toxicology
2-1-F- Ethical and scientific basics of medical research.	**2-1-G-** Mention the ethical and scientific principles of medical research methodology.

continuous (ARS)	Continuous (ILOs)
***2-2- Intellectual skills*:**	***2-2- Intellectual skills:***
2-2-A-Correlation of different relevant sciences in the problem solving and management of common problems of the forensic medicine and clinical toxicology	**2-2-A-** Correlate the relevant facts of relevant basic and clinically supportive sciences with reasoning, diagnosis and management of common problems of the forensic medicine and clinical toxicology
2-2-B-Problem solving skills based on data analysis and evaluation (even in the absence of some) for common situations related to forensic medicine and clinical toxicology	**2-2-B-** Demonstrate an investigatory and analytic thinking approach (problem solving) to common clinical or practical situations related to forensic medicine and clinical toxicology
2-2-C- Demonstrating systematic approach in studding common themes or problems relevant to the forensic medicine and clinical toxicology field.	**2-2-C-** Design and /or present a case or review (through seminars/journal clubs.) in one or more of common themes or problems relevant to the forensic medicine and clinical toxicology
2-2-D Making alternative decisions in different situations in the field of the forensic medicine and clinical toxicology	**2-2-D-** Formulate management plans and alternative decisions in different situations in the field of the forensic medicine and clinical toxicology

2-3- Practical skills:	***2/3/1/Practical skills)***
2-3-A- Provide practical and or laboratory services that can help patient care ,solving health problems and better understanding of the normal structure and function. **2-3-B-** Demonstrate practical/laboratory skills relevant to that forensic medicine and clinical toxicology	**2-3-1-A-** Demonstrate competently relevant laboratory skills related to forensic medicine and clinical toxicology. **2-3-1-B-** Use the up to date technology for the conditions related to forensic medicine and clinical toxicology **2-3-1-C-** Develop plans for performing experiments related to forensic medicine and clinical toxicology **2-3-1-D-** Carry out common experiments related to forensic medicine and clinical toxicology **2-3-1-E-** Counsel and educate students, technicians and junior staff, in the lab about conditions related to speciality; including handling of samples, devices, safety and maintenance of laboratory equipments. **2-3-1-F-** Use information technology in some of the situations related to forensic medicine and clinical toxicology **2-3-1-G-** Share in providing health care services aimed supporting patient care ,solving health problems and better

	understanding of the normal structure and function.
2-3-C- Write and comment on reports for situations related to the field forensic medicine and clinical toxicology	**2-3-1-H** Write competently all forms of professional reports related to the speciality (lab reports, experiments reports,).

continuous (ARS)	Continuous (ILOs)
2-4- General skills	***2/3/2 General skills***
2-4-A- Demonstrate practice-based learning and improvement skills that involves investigation and evaluation of their own practice, appraisal and assimilation of scientific evidence, improvements in provided services and risk management	**2-3-2-A-** Perform practice-based improvement activities using a systematic methodology (share in audits and risk management activities and use logbooks). **2-3-2-B-** Appraises evidence from scientific studies. **2-3-2-C-** Conduct epidemiological Studies and surveys.
2-4-B- Use all information sources and technology to improve his practice.	**2-3-2-C-** Conduct epidemiological Studies and surveys. **2-3-2-D**-Performdata management including data entry and analysis and Using information technology to manage information, access on-line medical information; and support their own education.
2-4-C- Demonstrate skills of teaching and evaluating others.	**2-3-2-E-** Facilitate learning of students, lab technical staff and other health care professionals including their evaluation and assessment.
2-4-D- Demonstrate interpersonal and communication skills that	**2-3-2-F-** Maintain therapeutic and ethically sound

result in effective information exchange and teaming with patients, their families, lab technical staff and other health professionals.	relationship with patients, their families, lab technical staff and other health professionals. **2-3-2-G-** Elicit information using effective nonverbal, explanatory, questioning, and writing skills. **2-3-2-H-** Provide information using effective nonverbal, explanatory, questioning, and writing skills. **2-3-2-I-** Work effectively with others as a member of a team or other professional group.
2-4-E-Demonstrate professionalism behaviors, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.	**2-3-2-J-** Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society. **2-3-2-K**- Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, business practices. **2-3-2-L**-Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.

2-4-F- Demonstrate an awareness of and responsiveness to the larger context and system of health care and academic services and the ability to effectively use system resources to provide care that is of optimal value.	**2-3-2-M**-Work effectively in relevant academic and health care delivery settings and systems including good administrative and time management. **2-3-2-N-** Adopt cost-effective practice and resource allocation that does not compromise quality of services. **2-3-2-O**- Assist patients in dealing with system complexities.
2-4-G- Demonstrate skills of effective time management.	**2-3-2-M**-Work effectively in relevant academic or health care systems including good administrative and time management.
2-4-H- Demonstrate skills of self and continuous learning.	**2-3-2-A-** Perform practice-based improvement activities using a systematic methodology (share in audits and risk management activities and use logbooks).

III-Program matrix
Knowledge and Understanding

Course	Program covered ILOs							
	2/1/A	2/1/B	2/1/C	2/1/D	2/1/E	2/1/F	2/1/G	2/1/H
Course 1 : Forensic Pathology	✓	✓	✓	✓	✓	✓	✓	
course 2 : Forensic Chemistry.	✓	✓	✓		✓	✓	✓	
course 3 : . Clinical Toxicology	✓	✓	✓		✓	✓	✓	
Course 4 : Forensic Medicine	✓	✓	✓	✓	✓	✓	✓	✓

Intellectual

Course	Program covered ILOs			
	2/1/A	2/1/B	2/1/C	2/1/D
Course 1 : Forensic Pathology	✓	✓	✓	
course 2 : Forensic Chemistry.	✓	✓	✓	
course 3 : . Clinical Toxicology	✓	✓	✓	
Course 4 : Forensic Medicine	✓	✓	✓	✓

Practical Skills (Patient Care)

Course	Program covered ILOs							
	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 : Forensic Pathology	✓	✓		✓		✓		✓
course 2 : Forensic Chemistry.	✓	✓		✓		✓		✓
course 3 : Clinical Toxicology	✓	✓		✓		✓		✓
Course 4 : Forensic Medicine	✓	✓	✓	✓	✓	✓	✓	✓

General Skills

Course	Program covered ILOs							
	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 : **Forensic Pathology**	✓	✓	✓	✓	✓	✓	✓	✓
course 2 : **Forensic Chemistry.**	✓	✓	✓	✓	✓	✓	✓	✓
course 3 : **Clinical Toxicology**	✓	✓	✓	✓	✓	✓	✓	✓
Course 4 : **Forensic Medicine**	✓	✓	✓	✓	✓	✓	✓	✓

General Skills

Course	Program covered ILOs						
	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
Course 1 : Forensic Pathology	✓	✓	✓	✓	✓	✓	✓
course 2 : Forensic Chemistry	✓	✓	✓	✓	✓	✓	✓
course 3 : Clinical Toxicology	✓	✓	✓	✓	✓	✓	✓
Course 4 : Forensic Medicine	✓	✓	✓	✓	✓	✓	✓

Annex 7, Additional information:

Staff members:

Name	
Prof	Nassef Nageh Zaki
Prof	Abdel-Wahab Abdel-Karim Dawood
Prof	Afaf Mohamed Ahmed Farghaly
Prof	Nahed A Abdel-Hamid
Prof	Wafaa Mohamed Abdel-Monim
Prof	Ragaa Mohamed Abdel-Maaboud
Prof	Randa Hussein Abdel-Hady
Prof	Hala Mohamed Fathy Ahmed
Prof	Zaghloul Thabet Mohamed
Prof	Hayam Zakaria Thabet
Prof	Saly Yehia Abd-El Hamid
Prof	Aml Ali Mohamed Ali
Prof	Safaa M. George
Prof	Nagwa Mahmoud Ali Ghandour
Prof	Ghada Ali Farghali Omran
Prof	Heba Atia yassa
Dr.	Noura Zeidan
Dr.	Doaa Abd El-Rahman
Dr.	Eman Salah Shaltout
Dr.	Noha Esmael
Dr.	Doaa M. Almaz
Dr.	Asmaa Hassan

- **Opportunities within the department:**

- **Department quality control insurance for completing the program:** Evaluation by the Department head and staff members.
- Regular assessments.
- Log book monitoring.
- Recent equipments and Specialized Units.

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(End of the program specification)