



## إعتماد توصيف مقررات برنامج الماجستير في الطب الشرعى والسموم

### الأكلينيكية

نقر نحن الموقعون على هذا أدناه أن توصيف وثيقة البرنامج التعليمى لدرجة الماجستير فى الطب الشرعى والسموم الأكلينيكية والمقررات الدراسية المكونة له قد تم وضعها بمعرفة الأقسام

المعنية

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عميد الكلية



وكيل الكلية للدراسات العليا

## Peer Revision

Reviewers	University	Date of Revision
- Prof. Dawlat Salem	Cairo	10/12/2011
- Prof. Ahmad K. Mansur	Mansura	28/11/2011

# **Program Specification of Master Degree in Forensic medicine & clinical toxicology**

**Sohag University**

**Faculty of Medicine**

## **A. Basic Information**

1. Program title: Master Degree in Forensic Medicine & Clinical Toxicology
2. Program type: Multiple
3. Faculty: Faculty of Medicine
4. Department: Forensic Medicine & Clinical Toxicology.
5. Coordinator: Dr. Soheir Ali Mohamed
6. Ass. Co-ordinator : Rania Ahmed Redwan
7. External evaluator: Prof. Dr. Ragaa Mohamed Abdel Maboud
8. Last date of program specifications approval: Faculty council No. 219, decree No. (8115)dated 19/12/2011, re-approval: Faculty council No. 228, decree No. 9801dated 10/9/2012.

## **B. Professional Information:**

### **1. Program aims:**

The aim of this program is to provide the graduate with the medical knowledge and skills essential for the practice of specialty and necessary to gain further training and practice in the field of forensic medicine & clinical toxicology through providing

1. Scientific knowledge essential for practice of forensic medicine & clinical toxicology according to the international standers.
2. Skills necessary for proper diagnosis of forensic and toxicology cases, problems solving and decision making.
3. Ethical principles related to the practice in this specialty
4. Active participation in community needs assessments and problem solving.
5. Maintenance of learning abilities necessary for continuous medical education.
6. Maintenance of research interest and abilities.

### **2. Attributes of the post graduate:**

1. Mastering the basics of scientific research methodologies.
2. The application of the analytical method and used in the field of Forensic medicine
3. The application of specialized knowledge and integrate it with the relevant knowledge in practice.
4. Be aware of the problems and has modern visions in the field of Forensic medicine
5. Identify problems in the field of Forensic medicine and find solutions to them.
6. Mastery of professional skills in this specialty and use of the appropriate recent technologies supporting these skills.

7. Communicate effectively and the ability to lead work teams.
8. Decision-making in his professional contexts.
9. To employ and preserve the available resources to achieve the highest benefit.
10. Awareness of his role in the community development and preservation of the environment at the lights of both international and regional variables.
11. Reflects the commitment to act with integrity and credibility, responsibility and commitment to rules of the profession.
12. Academic and professional self development and be capable of continuous learning.

### **3. Intended learning outcomes (ILOs):**

#### **a) Knowledge and understanding:**

By the end of the study of master program in forensic medicine and clinical toxicology the graduate should be able to:

- a1. List types and procedure for forensic autopsy.
- a2. Describe how to examine the scene of death and diagnose death.
- a3. Describe medico legal aspects of personal identification of living and dead human bodies
- a4. Mention the pathology of wounds and different types of injuries in human body.
- a5. Explain of forensic serology that deals with different body fluids.
- a6. Mention the analytical and instrumental methods used in investigating crimes.
- a7. Describe extraction of various drugs or poisons from body fluids and the keratinized tissues
- a8. Describe principles of toxicology of different types of poisonous substances and drugs including classification, mechanism of action and clinical features of toxicity.
- a9. Describe examination of the scene of death in cases of poisoning
- a10. List chemicals and drugs which induce organ toxicity.
- a11. Demonstrate the criteria, clinical features, diagnosis and general management of dependence producing substances and drugs
- a12. Mention the antidotal studies and evaluation of toxicity in human subjects.
- a13. List the general scheme for testing drugs or poisons
- a14. Mention the sources of data collection for vital statistics
- a15. Mention how to construct tables and graphs .
- a16. Enumerate Scientific developments in the field of forensic medicine and clinical toxicology
- a17. Describe the mutual influence between professional practice and its impacts on the environment.
- a18. Mention the ethical and legal principles of professional practice in the field of forensic medicine and clinical toxicology
- a19. Mention the principles and fundamentals of quality in professional practice in the field of forensic medicine and clinical toxicology

#### **b) Intellectual skills:**

By the end of the study of master program in forensic medicine and clinical toxicology the graduate should be able to:

- b1. Interpret the features of the scene of the crime in the field of forensic medicine and clinical toxicology for proper diagnosis of forensic and toxicology cases.

- b2. Select from different diagnostic alternative the ones that help reaching a final diagnosis for forensic and toxicology cases.
- b3. Link between knowledge for Professional problems' solving.
- b4. Conduct a research study and / or write a scientific study on a research problem.
- b5. Assess risk in professional practices in the field of forensic medicine and clinical toxicology.
- b6. Plan to improve performance in the field of forensic medicine and clinical toxicology.
- b7. Identify forensic medicine and clinical toxicology problems and find solutions .
- b8. Analyze research and issues related to the forensic medicine and clinical toxicology.

**c) Professional and practical skills**

By the end of the study of master program in forensic medicine and clinical toxicology the graduate should be able to

- c1. Mention the basic and modern professional skills in the area of forensic medicine and clinical toxicology.
- c2. Write and evaluate of medico legal reports.
- c3. Assess methods and tools existing in the area of forensic medicine and clinical toxicology.

**d) General and Transferable skills**

By the end of the study of master program in forensic medicine and clinical toxicology the graduate should be able to:

- d1. Communicate effectively by all types of effective communication
- d2. Use information technology to serve the development of professional practice
- d3. Assess himself and identify personal learning needs.
- d4. Use different sources to obtain information and knowledge.
- d5. Develop rules and indicators for assessing the performance of others.
- d6. Work in a team, and team's leadership in various professional contexts.
- d7. Manage time Efficiently.
- d8. Learn himself continuously

**4. Academic Standards:**

Sohag Faculty of Medicine adopted the general National Academic Reference Standards (NARS) provided by the national authority for quality assurance and accreditation ( naqaae) for postgraduate program . This was approved by the faculty Council decree No. 6854, in its cession No. 177 Dated : 18/5/2009 .Based on these NARS; The Academic Reference Standards(ARS) were suggested for this program These ARS were approved by the faculty council decree No7528, in its cession No 191, dated : 15/3/2010 . The adoption of NARS and the suggested ARS were approved by University council degree No 587, in its cession No.60. dated 26-12-2011.

**5. Curriculum structure and contents:**

5.a- Program duration: 6 semesters ( 3 years).

5.b- Program structure :

5.b.i- Number of hours per week:

	No. Of	hours/week	
Subject	Lectures	Practical	Clinical
<u>First Part:</u>			

Forensic chemistry module	1	1	-
General Toxicology module	1	1	-
Medical Ethics & responsibility module	1	1	
Pathology	1	1	-
Clinical Pharmacology	1	1	-
Internal Medicine	1	-	1
<u>Second Part:</u>			
Forensic Medicine	7	5	-
Clinical Toxicology	4	3	-
Injuries & infirmity	4	2	

code	Item	No	%	
b.i	Total credit hours	Compulsory	50	100
		Elective	0	0
		Optional	0	0
b.iii	credit hours of basic sciences courses	4	8	
b.iv	credit hours of courses of social sciences and humanities	0	0	
b.v	credit hours of specialized courses:	35	70	
b.vi	credit hours of other course	2	4	
b.vii	Practical/Field Training	17	34	
b.viii	Program Levels (in credit-hours system):			
	Level 1: 1 <sup>st</sup> part	15	30	
	Level 2: 2 <sup>nd</sup> Part	24	48	
	Level 3: Thesis	6	12	

### 6. Program Courses :

Compulsory Course: 7 courses

4.c1. Level of program:

Semester...1.....

First part:

a. Compulsory

Course title	Total No. of hours	No of Lectures	hours /week Practical	Clinical	program ILOs Covered
<u>Part:</u>					
Forensic chemistry	2	1	1	-	a5,a6,a7a9,a10,a11,a14,a15,a16, a17,a18,a19,b1,b2,b3,b6,b7,b8, c1,c2,c3, d2,d3,d4,d5,d6,d7,d8.
General Toxicology	2	1	1	-	A8,a9,a10,a12,a16, a17,a18.b1,b2,b3,b4, b5,b6,b7,b8,c1,c2,c3, d1,d2,d3,d4,d5,d6,d7,d8.
Medical Ethics & responsibility	2	1	1	-	A17,a18,a19 b1,b2,b3,b5,b7,b8,c1,c2,

					c3,d1,d2,d3,d4,d5,d6,d8.,
Pathology	2	1	1	-	a4,a16,a17,a18,a19,b1, b2,b3,b4,b5,b6,b7,b8,c1,c2,c3, d1,d2,d3,d4,d5,d6,d7,d8.
Clinical Pharmacology	2	1	1	-	a8,a10,a11,a12,a13,a16, a17,a18,a19,b3,b4,b6,b8, c1 ,d1,d2 ,d4,d5,d6, d8.
Internal Medicine	2	1	-	1	a12,a16,a17,a18,a19, b1,b2,b3,b5,b6,b8,c1,c2, d1,d2,d3,d4,d5,d6,d7,d8
Biostatistics and computer,and research methodology	2	1	1		b5,c2,d2,d5

**Second Part:**

Forensic Medicine	12	7	5	-	A1 ,a2,a3,a4,a5,a16 ,a17,a18,a19 b1,b2, b3,b4,b5,b6,b7,b8,c1,c2, c3,d1,d2,d3,d4,d5,d6,d7, d8.,
Clinical Toxicology	7	4	3	-	A6,a7,a8,a9,a10,a11, a12,a13,a16,a17,18,a19,b 1,b2,b3,b4,b5,b6,b7, b8,c1,c2,c3,d1,d2,d3,d4,d 5,d6,d7,d8.,
Injuries & infirmity	6	4	2		A4,a17,a18, b1,b2,b3,b4, b7,b8,c1,c2 d1,d2,d4,d5,d6,d8.,

**7. Program admission requirements**

I- General Requirements.

1. Candidate should have either:

- i. MBBch degree from any Egyptian Faculty of Medicine or
- ii. Equivalent Degree from Medical Schools abroad approved by the ministry of high Education.

2. Candidate should pass the house office training year.

3. Those who are not university hospital residents should pass a training for at least 12 months in one of the known hospitals.

4. Follow postgraduate bylaw Regulatory rules of Sohag Faculty of Medicine approved by the ministerial decree No. (44), dated 6/1/2010.

5. Specific requirements:

A- Candidates graduated from Egyptian Universities should have at least "Good Rank "in their final year / cumulative years examination and grade "Good Rank "in Forensic and Clinical toxicology course too.

B- Graduate should know how to speak & write English well.

C- Graduate should have computer skills.

**8. Regulations for Progression and Program Completion**

Duration of program is 50 credit hours ( $\geq 4$  semesters  $\geq 3$  years), starting from registration till 2<sup>nd</sup> part exam; divided to:

First Part: (15 Credit hours  $\geq 6$  months  $\geq 1$  semester):

- Program-related basic & clinical sciences & research Methodology, Ethics & medical reports, Biostatistics and computer.
- At least six months after registration should pass before the student can ask for examination in the 1<sup>st</sup> part.
- Two sets of exams: 1st in October — 2nd in April.
- At least 50% of the written exam is needed to pass in each course.
- For the student to pass the first part exam, a score of at least 60% (Level D) in each course is needed.
- Those who fail in one course need to re-exam it only for the next time only, and if re-fail, should register for the course from the start.
- Thesis/Essay(6 Credit hours  $\geq 6$  months=1 semester):
- Completion of the 1<sup>st</sup> part credit hours and passing the exams are pre requisites for documentation of the Thesis/Essay subject.
- Should be completed, defended and accepted after passing the 1<sup>st</sup> part examination, and at least one month before allowing to enter 2<sup>nd</sup> part final examination.
- Accepting the thesis is enough to pass this part.

Second Part: (24 Credit hours  $\geq 18$  months= 3 semesters):

Program related specialized sciences in forensic medicine and clinical toxicology courses

- Completion of the 1<sup>st</sup> part credit hours and passing the exams are pre requisites for documentation of the 2<sup>nd</sup> part courses.
- After passing at least:
- Practical training : 36 months training in the department of in forensic medicine and clinical toxicology courses
- The students should pass the 1<sup>st</sup> part before asking for examination in the 2<sup>nd</sup> part.
- Fulfillment of the requirements in each course as described in the template and registered in the log book (5 Credit hours; with obtaining  $\geq 75\%$  of its mark ) is a prerequisite for candidates to be assessed and undertake part 1 and part 2 examinations; the credit hours of the logbook are calculated as following:
  - Each Cr. Hr.= 60 working Hrs.
  - Logbook= 5 Cr. Hr. X 60 working Hrs = 300 Working Hrs.
  - Collection of working Hrs. is as following:

Activity		Hrs
Grand rounds	اجتماع علمي موسع	6
Training courses	دورات تدريبية	12/ day
Conference attendance	حضور مؤتمرات علمية داخلي	12/day
	خارجية	18/day
Thesis discussion	حضور مناقشات رسائل	6

Workshops	حضور ورش عمل	12/day
Journal club	ندوة الدوريات الحديثة	6
Seminars	لقاء علمي موسع	6
Morbidity and Mortality conference	ندوة تحليل المخاطر المرضية أو الوفاة	6
Self education program	برنامج التعليم الذاتي	6

- Two sets of exams: 1st in October - 2nd in April.
- At least 50% of the written exam is needed to pass in each course.
- For the student to pass the 2<sup>nd</sup> part exam, a score of at least 60% (Level D) in each course is needed.

### 9. Methods of student assessments:

Method of assessment	eight	The assessed ILOs
1-Activities		- General transferable skills, intellectual skills
2-Written Exams: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	50%	- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills
3-OSCE/ OSPE	50%	-Practical skills, intellectual skills, general transferable skills
4-Structured Oral Exams		- Knowledge, Intellectual skills, General transferable skills

### Assessment schedule:

#### Part I:

- Clinical Pharmacology, General Toxicology and Medical Ethics & responsibility: Written Exam (2 hours) + structured oral Exam OSPE.
- Forensic chemistry: Written Exam (2 hours) + OSPE + structured oral Exam
- Pathology: Written Exam (2 hours) + OSPE + structured oral Exam
- Internal Medicine: Written Exam (2 hours) + OSCE + structured oral Exam
- Biostatistics & Computer and Research Methodology: Written Exam (2 hours) + Structured oral Exam+ OSPE

#### Part II:

- Four Written Exams (3 hours for each) two for Clinical Toxicology and two for Forensic Medicine and Injuries & infirmity + OSCE for Clinical Toxicology+ OSPE for Forensic Medicine and Injuries & infirmity + Structured oral Exam for each.

### 10. Evaluation of program.ARC revised by external evaluator

Evaluator	Tool	Sample
1- Senior students	Questionnaire	3
2- Alumni	Questionnaire	1
3- Stakeholders ( Employers)	Questionnaire	15
4-External Evaluator(s) (External Examiner(s))	Report	1
5- Other		



# Course Specification of Clinical Pharmacology, general toxicology and medical ethics and responsibilities for master degree in Forensic Medicine & Clinical Toxicology

Sohag University

Faculty of Medicine

## Course Specifications

1. Programme (s) on which the course is given: Master degree in forensic medicine & clinical toxicology
2. Major or Minor element of program: Minor.
3. Department offering the program: Dept. of Forensic Medicine & Clinical Toxicology
4. Department offering the course: Dept. of Clinical Pharmacology Dept. and Forensic Medicine & Clinical Toxicology
5. Academic year / Level; 1st part
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

### A. Basic Information

**Title:** Clinical Pharmacology , general toxicology and medical ethics and responsibilities for master degree in Forensic Medicine & Clinical Toxicology

**Code:** FOR:0509-200

**Total hours:**

Module	Lectures	Practical	Tutorial	total hours	credit
Clinical Pharmacology	15	30	-----	45	2
General toxicology	15	30	-----	45	2
Medical ethics and responsibilities	15	30	-----	45	2

### B. Professional Information

#### 1. Overall Aims of Course

##### Clinical Pharmacology module :

By the end of this course the student should be able to safely practice medicine guarded by knowledge o the pharmacological properties, pharmacokinetics mechanism of action, side effects and interactions of the common drugs which operate on the human body Also he/she can diagnose and describe general management of poisoned patient independently.

##### General toxicology module :

By the end of this course the student should be able to safely practice medicine guarded by knowledge of types, actions, clinical features and circumstances of poisoning which operate on the human body . Also he/she can diagnose and describe general management of poisoned patient independently.

##### Medical ethics and responsibilities module :

By the end of this course the student should be able to safely practice medicine guarded by medical ethics and avoiding malpractice. Also he/she can deal with medical problems and can diagnose and detect medical responsibility independently.

## **2. Intended Learning Outcomes of Course (ILOs)**

### **Clinical Pharmacology module :**

#### **a) Knowledge and Understanding:**

By the end of the course, students should be able to:

- a1. Describe principles of toxicology of different types of poisonous substances and drugs including classification, mechanism of action,
- a2. List the pharmacological properties and pharmacokinetics of different types of poisonous substances and drugs.
- a3. List drug interactions and the main side effects
- a4. List chemicals and drugs which induce organ toxicity.
- a5. Demonstrate the criteria, clinical features, diagnosis and general management of dependence producing substances and drugs
- a6. Mention the antidotal studies .
- a7. List the general scheme for testing drugs or poisons
- a8. Describe Scientific developments in the field of Clinical Pharmacology.
- a9. Mention the ethical and legal principles of professional practice in the field of Clinical Pharmacology.
- a10. Mention the principles and fundamentals of quality in professional practice in the field of Clinical Pharmacology.
- a11. Describe the basics and ethics of scientific research

#### **b) Intellectual Skills**

By the end of the course, students should be able to:

- b1. Link between knowledge for Professional problems' solving.
- b2. Conduct a research study and / or write a scientific study on a research problem.
- b3. Plan to improve performance in the field of Clinical Pharmacology.
- b4. Analyze research and issues related to Clinical Pharmacology.

#### **c) Professional and Practical Skills**

By the end of the course, students should be able to:

- c1. Extract various drugs or poisons from body fluids

#### **d) General and Transferable Skills**

By the end of the course, students should be able to:

- d1. Communicate effectively by all types of effective communication
- d2. Manipulate computer programs, do web search, to write an essay about recent subjects of Clinical Pharmacology which related to toxicology , with trial of solving
- d3. Use different sources to obtain information and knowledge.
- d4. Develop rules and indicators for assessing the performance of others.
- d5. Work together to perform some laboratory tests for detection of some poisons
- d6. Learn himself continuously

### **General toxicology module :**

#### **a) Knowledge and Understanding:**

By the end of the course, students should be able to:

- a1. Describe principles of toxicology of different types of poisonous substances and drugs including classification, mechanism of action and clinical features of toxicity.
- a2. Describe general management of poisoned patient (alert and comatose) .
- a3. Describe examination of the scene of death in cases of poisoning
- a4. List chemicals and drugs which induce organ toxicity.
- a5. Mention the antidotal studies.
- a6. Describe Scientific developments in the field of clinical toxicology
- a7. Mention the ethical and legal principles of professional practice in the field of clinical toxicology.
- a8. Describe the principles and fundamentals of quality in professional practice in the field of clinical toxicology

**b) Intellectual Skills**

By the end of the course, students should be able to:

- b1. Interpret the features of the scene of the crime in the field of forensic medicine and clinical toxicology for proper diagnosis of toxicology cases.
- b2. Select from different diagnostic alternative the ones that help reaching a final diagnosis for toxicology cases
- b3. Interpret features of a case study of poisoning to solve the problem.
- b4. Conduct a research study and / or write a scientific study on a research problem.
- b5. Assess risk in professional practices in the field of clinical toxicology.
- b6. Plan to improve performance in the field of clinical toxicology.
- b7. Analyze case scenario of intoxicated patient and formulate treatment plan..
- b8. Analyze research and issues related to clinical toxicology.

**c) Professional and Practical Skills**

By the end of the course, students should be able to:

- c1. Perform some chemical tests on laboratory to identify some poisons.
- c2. Write and evaluate standard medical report about a case of poisoning through interpretation of history, clinical examination and laboratory test findings .
- c3. Assess methods and tools existing in the area clinical toxicology.

**d) General and Transferable Skills**

By the end of the course, students should be able to:

- d1. Communicate with each others and interact effectively and ethically with patients presenting with signs of poisoning in the admission units of the hospitals then write a report about the case and discuss it with staff members
- d2. Manipulate computer programs, do web search, to write an essay about recent subjects of general toxicology or worldwide problems related to toxicology , with trial of solvin.
- d3. Assess himself and identify personal learning needs.
- d4. Use of different sources for information and knowledge
- d5. Develop rules and indicators for assessing the performance of others
- d6. Work in a team, and team's leadership to perform some laboratory tests about detection of some poisons .
- d7. Manage time Efficiently
- d8. Present orally a toxicological reports in accordance with the standard scientific guidelines in seminars or group meetings, discuss results, defend his/her ideas with staff members. Students can recognize and accept the limitations in their knowledge and clinical skills.

**Medical ethics and responsibilities module :**

**a) Knowledge and Understanding:**

By the end of the course, students should be able to:

- a1. Mention types and items of consent.
- a2. Mention professional secrecy.
- a3. Mention types of malpractice.
- a4. Mention items of medical responsibility.
- a5. Describe ethical considerations of medical research involving human subjects.
- a6. Mention the principles and fundamentals of ethics and legal aspects of professional practice in the field of forensic medicine and clinical toxicology
- a7. Describe the basics and ethics of scientific research

**b) Intellectual Skills**

By the end of the course, students should be able to:

- b1. Interpret the theories and principles that govern ethical decision making, especially of the major ethical dilemmas in medicine
- b2. Formulate the threats to medical professionalism and common medical errors which can occur during practice of medicine.
- b3. Select from different diagnostic tool the one that can reach problem solving
- b4. Link between knowledge for Professional problems' solving.
- b5. Assess risk in professional practices in the field of forensic medicine and clinical toxicology.
- b6. Identify forensic medicine and clinical toxicology problems and find solutions .
- b7. Analyze research and issues related to the medical ethics & responsibilities.

**c) Professional and Practical Skills**

By the end of the course, students should be able to:

- c1. Describe the basic and modern professional skills in the area of forensic medicine and clinical toxicology.
- c2. Write and evaluate standard medical report about a case of malpractice or medical responsibilities through interpretation the findings of the case.
- c3. Assess methods and tools existing in the area of forensic medicine and clinical toxicology.

**d) General and Transferable Skills**

By the end of the course, students should be able to:

- d1. Communicate with each others and interact effectively and ethically with the patients .
- d2. Manipulate computer programs, do web search, to write an essay about worldwide problems or a subject in medical ethics.
- d3. Assess himself and identify personal learning needs.
- d4. Use different sources to obtain information and knowledge.
- d5. Develop rules and indicators for assessing the performance of others.
- d6. Work in a team, and team's leadership in various professional contexts.
- d7. Present reports about major ethical dilemmas in medicine in accordance with the standard scientific guidelines in seminars or group meetings, discuss results, defend his/her ideas with staff members

### 3. Contents of the course:

#### Clinical Pharmacology module :

Topic	N0 of tota l hours	lecture	practical
General Clinical Pharmacology	4	2	2
Hypertension, Myocardial ischemia	4	1	3
Heart failure, antidysrthmic drugs	4	2	2
Benzodiazepines	4	1	3
Barbiturates,	4	1	3
Opiates	4	2	2
Laxatives & cathartics	4	1	3
Diuretics	4	1	3
Non steroidal analgesics	6	2	4
Autonomic nervous system	7	2	5
<b>Total</b>	<b>45</b>	<b>15</b>	<b>30</b>

#### General toxicology module :

Topic	No5 of hours	Lecture	2 Practical
Toxic injury of the eye		3	2
Endocrine agent toxicity	5	3	2
Geriatric toxicology poisoning	6	3	4
Disaster management of massive toxic exposure	4	2	4
Poisonous anthropods, mushrooms, poisonous plants, toxic marine life , botulism and food poisoning	4	2	3
Management of overdose in Designer drugs	5	2	3
Management of respiratory Drug dependence	4	2	2
Laboratory diagnosis and drug atient	5	2	3
Natural hallucinogens	7	2	5
Toxin induced cardiovascular	6	2	4
Toxicity of centrally active drugs as: sedatives, tricyclic antidepressants, benzodiazepines , antipsychotic drugs, anticonvulsants and antihistamines	6	2	4
Analgesics : acetaminophine salicylate, non steroidal anti-	5	2	3
	5	2	3
	4	2	6

inflammatory drug toxicity			
Toxicity of muscle relaxants	6	2	4
Toxicity of vitamins	4	2	2
Toxicity of heavy metals and inorganic agents	4	2	2
Pesticides poisoning	8	2	6
Inhalation poisoning, volatiles and solvents	7	3	4
Corrosives : acids and alkali injury, bleach, soap and detergents	7	3	4
Cosmetics , toilet articles, baby powder, and camphor	4	2	2
<b>Total hours</b>	<b>150</b>	<b>60</b>	<b>90</b>

#### Medical ethics and responsibilities module :

Topic	No. of hours	Lecture	Practical
قسم الاطباء وضوابط و اخلاقيات ممارسة الطب	6	2	4
النظام التاديبى للاطباء	7	2	5
واجبات الطبيب نحو المجتمع، نحو المهنة، نحو المرضى و نحو الزملاء	4	1	3
سرية المهنة و المسؤولية الطبية	5	1	4
الأخلاقيات في استخدام الخلايا الجذعية للجنين البشرى فى بحوث العلاج الجينى- أخلاقيات التعامل مع الجنين المشوه	7	3	4
التقارير الطبية و شهادة الزور و شهادة الوفاة	3	1	2
حق الطبيب فى علاج المرضى	4	1	3
الابعاد الاخلاقية لنقل الاعضاء و تشريح الجثة	5	2	3
مشاكل و قضايا تتعلق بالموت الرحيم وقف اجهزة الانعاش الصناعى	4	2	2
<b>Total hours</b>	<b>45</b>	<b>15</b>	<b>30</b>

#### 4. Teaching and Learning Methods:

4.1- Lectures

4.2- practical lessons with performance of various extraction and detection techniques

4.3-Assignment

4.4- Attending and participating in scientific conferences, work shops and discussion to acquire the general and transferable skills.

### **5. Student Assessment Methods**

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.3-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
5.4 assignment	-General transferable skills, intellectual skills

### **Assessment Schedule**

Assessment 1 : ...Final Written exam...week (24)

Assessment 2 : ...Final Structured Oral Exam ...week (24)

### **Weighting of Assessments**

Final written exam	50%
Final Structured Oral Exam	50%
Total	100%

### **6. List of References**

#### **Clinical Pharmacology module :**

6.1-Course notes : Lectures notes prepared by the staff members of the department.

6.2-Essential Books:

Goodman and Gilman, Katzung, Lipnocott.

6.3-Recommended Books:

6.4-Periodicals and websites:

#### **General toxicology module :**

6.1-Course notes : Lectures notes prepared by the staff members of the department

6.2-Essential Books:

- Principles of Clinical Toxicology by Gossel, T., and Bricker
- Clinical managements of poisoning and drug overdose. By Hddad

6.3-Recommended Books:

- General & Applied Toxicology by Macmillan

- Toxicological emergencies.

#### 6.4- Periodicals and websites:

Forensic Science International, Egyptian Journals of Forensic Medicine and Clinical Toxicology, International Journals of Forensic Medicine and Clinical Toxicology  
[www.sciencedirect.com](http://www.sciencedirect.com)

Medical ethics and responsibilities module :

6.1-Course notes : Lectures notes prepared by the staff members of the department

#### 6.2-Essential Books:

Medical ethics by Veatch, R, M

#### 6.3-Recommended Books:

Medical ethics. by Jones & Barlett

#### **Periodicals and websites:**

Forensic Science International, Egyptian Journals of Forensic Medicine and Clinical Toxicology, International Journals of Forensic Medicine and Clinical Toxicology  
[www.sciencedirect.com](http://www.sciencedirect.com)

### **7. Learning Facilities Required for Teaching and Learning**

1-ADEQUATE INFRASTRUCTURE: including teaching places (teaching class, teaching halls, teaching laboratory), comfortable desks, good source of aeration, bathrooms, good illumination, and safety & security tools.

2- TEACHING TOOLS: including screens, computers including cd (rw), data shows, projectors, flip charts, white boards, video player, digital video camera, scanner, copier, colour and laser printers.

3- COMPUTER PROGRAM: for designing and evaluating MCQs

#### **Course Coordinator:**

**Clinical Pharmacology module** : Dr. Faten Mohamed Omran

**General toxicology module** : Dr. Soheir Ali Mohamed

**Medical ethics and responsibilities module**: Dr. Soheir Ali Mohamed

#### **Head of Department:**

**Clinical Pharmacology module** : Dr. Mahmud Hahamdi

**General toxicology module** : Dr. Maha Abdel Hameed Hilal

**Medical ethics and responsibilities module**: Dr. Maha Abdel Hameed Hilal

**Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013**



## Course Specification of Forensic Chemistry in Forensic Medicine & Clinical Toxicology

Sohag University

Faculty of Medicine

### Course Specifications

1. Programme (s) on which the course is given: Master degree in forensic medicine & clinical toxicology
2. Major or Minor element of program: Minor.
3. Department offering the program: Dept. of Forensic Medicine & Clinical Toxicology
4. Department offering the course: Dept. of Forensic Medicine & Clinical Toxicology
5. Academic year / Level; 1<sup>st</sup> part
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

### A- Basic Information

**Title:** Forensic Chemistry in Forensic Medicine & Clinical Toxicology

**Code:** FOR0509200

**Total hours:**

Module	Lectures	Practical	Tutorial	Total hours	Credit
Forensic chemistry	15	30	-----	45	2

### B- Professional Information

#### 1. Overall Aims of Course

- Provide essential knowledge about trace evidence obtained after a crime is committed.
- Provide basic knowledge about various separation, extraction, detection and quantitation techniques of certain substance or drug.
- Describe the common procedures, techniques, and applications of forensic chemistry .

#### 2. Intended Learning Outcomes of Course (ILOs)

##### a) Knowledge and Understanding:

By the end of the course, students should be able to:

- a-1 Explain of forensic serology that deals with different body fluids.

- a1. List the analytical and instrumental methods used in investigating crimes.
- a2. Describe principles of preparation of different eluents and spraying reagents used in thin layer chromatography .
- a3. Describe principles of color test.
- a4. Describe examination of the scene of death in cases of poisoning.
- a5. Describe different methods of samples collection at the scene of the crime
- a6. List chemicals and drugs which induce organ toxicity.
- a7. Demonstrate the criteria, clinical features, diagnosis and detection of dependence producing substances and drugs
- a8. Describe Scientific developments in the field of forensic chemistry.
- a9. Mention the ethical and legal principles of professional practice in the field of forensic chemistry.
- a10. List the principles and fundamentals of quality in professional practice in the field of forensic chemistry.
- a11. List the basics and ethics of scientific research

**b) Intellectual Skills**

By the end of the course, students should be able to

- b1. Interpret the features of the scene of the crime in the field of forensic medicine and clinical toxicology for proper diagnosis of forensic and toxicology cases
- b2. Select from different diagnostic alternative the ones that help reaching a final diagnosis for forensic and toxicology cases
- b3. Conduct research studies that adds to knowledge.b-4 plan appropriately in the research design.
- b4. Plan to improve performance in the field of forensic chemistry.
- b5. Identify forensic medicine and clinical toxicology problems and find solutions
- b6. Analyze research and issues related to the forensic chemistry.:

**c) Professional and Practical Skills**

By the end of the course, students should be able to:

- c1. Perform general scheme for testing some groups of poisons
- c2. Extract certain substances or drugs using the separating funnel either in acidic or in alkaline media
- c3. Extract various drugs or poisons from body fluids and the keratinized tissues such as human hair and finger nails
- c4. Prepare the plates of thin layer chromatography using silica gel G
- c5. Prepare of the different eluents used in thin layer chromatography and the suitable spraying reagent
- c6. Write and evaluate medico legal reports
- c7. Assess methods and tools existing in the area of forensic chemistry.

**d) General and Transferable Skills**

By the end of the course, students should be able to:

- d1. Manipulate computer programs, do web search, to write an essay about a subject in forensic chemistry.
- d2. Use information technology to serve the development of professional practice
- d3. Assess himself and identify personal learning needs.
- d4. Use different sources to obtain information and knowledge.
- d5. Develop rules and indicators for assessing the performance of others.

d6. Work together to perform some laboratory tests for detection of some poisons

d7. Manage time Efficiently.

d8. Present reports in accordance with the standard scientific guidelines in seminars or group meetings, discuss results, defend his/her ideas with staff members

**3. Contents of the course:**

Topic	No of hours	Lecture	2 Practical
Extraction and detection of gases	3	1	2
Extraction and detection of insecticides and zinc phosphide	3	1	2
Extraction and detection of organic chlorine compounds analytical and instrumental	3	1	2
Methods used in investigating crimes	3	1	2
Extraction and detection drug or addiction	3	1	2
Extraction and detection of antibiotic	3	1	2
Principles of extraction & detection	3	1	2
Extraction and detection of combustion product of firearm injury	3	1	2
Extraction from body fluids and kratinized tissues such as human hair and finger nails	45	15	30
Total hours			
Principles of thin layer chromatography	2	1	1
using silica gel G	3	1	2
Principles of color test			
General scheme for testing some groups or poisons	3	1	2
Irritant poisons and their detection	3	1	2
Corrosive poisons and their detection	3	1	2
Extraction of volatile poisons and their detection such as ethyl alcohol, methyl alcohol, chloroform, petroleum and hydrocyanic acid	3	1	2
Extraction and detection of non volatile organic compounds: Non basic compounds as a- analgesics as salicylic acid b-hypnotics c- antipyretic The basic compounds as a- antidepressants b- antihistamines c- narcotics analgesics d- CNS stimulants	3	1	2
Extraction and detection of vegetable alkaloids	3	1	2

**4. Teaching and Learning Methods:**

- 4.1- Lectures
- 4.2- practical lessons with performance of various extraction and detection techniques
- 4.3-Assignment
- 4.4- Attending and participating in scientific conferences, work shops and discussion to acquire the general and transferable skills.

### **5. Student Assessment Methods**

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.3-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
5.4-OSPE	-Practical skills, intellectual skills
5.5 assignment	-General transferable skills, intellectual skills

### **Assessment Schedule**

- Assessment 1 : ...Final Written exam...week (24)
- Assessment 2 : ...Final OSPE .....week (24)
- Assessment 3 : ...Final Structured Oral Exam ...week (24)

### **Weighting of Assessments**

Final written exam	50%
Final Structured Oral Exam	30%
Final OSPE	20%
Total	100%

### **6. List of References**

#### **6.1-Course notes :**

Lectures notes prepared by the staff members of the department.

#### **6.2-Essential Books:**

- Clarke's Analysis of Drugs and Poisons (2008)
- Applied thin layer chromatography (2007): by William J. Pesce
- Biochemistry toxicological and chemistry (2002): by Stanley.

#### **6.3-Recommended Books:**

- Forensic Toxicology laboratory guidelines. 2006 version.

#### **6.4-Periodicals and websites:**

Forensic Science International, Egyptian Journals of Forensic Medicine and Clinical Toxicology, International Journals of Forensic Medicine and Clinical Toxicology

[www.sciencedirect.com](http://www.sciencedirect.com)

## **7. Facilities Required for Teaching and Learning**

1-ADEQUATE INFRASTRUCTURE: including teaching places (teaching class, teaching halls, teaching laboratory), comfortable desks, good source of aeration, bathrooms, good illumination, and safety & security tools.

2- TEACHING TOOLS: including screens, computers including cd (rw), data shows, projectors, flip charts, white boards, video player, digital video camera, scanner, copier, colour and laser printers.

3- COMPUTER PROGRAM: for designing and evaluating MCQs

**Course Coordinator:** Dr. Soheir Ali Mohamed

**Head of Department:** Dr. Maha Abdel Hameed Hilal

**Date:** 18/12/2011, **Revised:**1/9/2012, **Revised:**1/12/2013

# Course Specification of Internal Medicine in Forensic Medicine & Clinical Toxicology

Sohag University

Faculty of Medicine

## Course Specifications

1. Program (s) on which the course is given: Master degree in forensic medicine & clinical toxicology
2. Major or Minor element of program: Minor.
3. Department offering the program: Dept. of Forensic Medicine & Clinical Toxicology
4. Department offering the course: Dept. of Internal Medicine
5. Academic year / Level; 1<sup>st</sup> part
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

### A. Basic Information

Title: Internal Medicine in Forensic Medicine & Clinical Toxicology

Code: MED 0509-200

### Total hours:

	Lectures	Practical	Clinical	Total hours	credit
Internal medicine	15	----	30	45	2

### B. Professional Information:.

#### 1. Overall Aims of Course

By the end of the course of Internal Medicine, the candidate should be able to:

1. Deal with common medical conditions on the basis of adequate history taking, physical examination, interpretation of relevant supportive investigations and management.
2. Deal with acute medical emergencies and especially those that may lead to sudden death safely and effectively.
3. Perceive and integrate progress in medical technology.

#### 2. Intended Learning Outcomes of Course (ILOs)

##### a) Knowledge and Understanding:

By the end of the course, students should be able to

- a1. Appreciate the clinical spectrum of common medical conditions with multisystem affection.
- a2. Describe the concept of emergency management of acute medical disorders associated with toxicity or injury

- a3. Describe Scientific developments in the field of internal medicine.
- a4. Mention the ethical and legal principles of professional practice in the field of internal medicine.
- a5. List the principles and fundamentals of quality in professional practice in the field of internal medicine.
- a6. List the basics and ethics of scientific research

**b) Intellectual Skills**

By the end of the course, students should be able to

- b1. Interpret the features taken from the history in the field of internal medicine for proper diagnosis of cases.
- b2. Select from different diagnostic alternative the ones that help reaching a final diagnosis for internal medicine cases
- b3. Link between knowledge for Professional problems' solving.
- b4. Assess risk in professional practices in the field of internal medicine .
- b5. Plan to improve performance in the field of internal medicine.
- b6. Analyze research and issues related to the forensic medicine and clinical toxicology.

**c) Professional and Practical Skills**

By the end of the course, students should be able to

- c1. Mention of the basic and modern professional skills in the area of internal medicine.
- c2. Write and evaluate of medical reports

**d) General and Transferable Skills**

By the end of the course, students should be able to

- d1. Communicate with each others and interact effectively and ethically with patients presenting with signs of poisoning in the admission units of the hospitals then write a report about the case and discuss it with staff members
- d2. Manipulate computer programs, do web search, to write an essay about recent subjects of internal medicine related to toxicology , with trial of solving.
- d3. Assess himself and identify personal learning needs.
- d4. Use different sources to obtain information and knowledge.d-5 Develop rules and indicators for assessing the performance of others.
- d5. different sources to obtain information and knowledge.
- d6. Develop rules and indicators for assessing the performance of others.
- d7. Work in a team, and team's leadership in various professional contexts.
- d8. Manage time Efficiently.
- d9. Learn him self continuously

**3. Contents:**

Topics	No. of hours	Lecture	Clinical
Cardiovascular Symptoms and signs	6	2	4
Infective endocarditis	3	1	2
Myocarditis	2	1	1
Acute coronary syndromes	4	1	3
Sudden death	3	1	2

Acute heart failure	4	1	3
acute pulmonary oedema	3	1	2
Pulmonary embolism	2	1	1
Trauma to the chest	4	1	3
Drug induced renal disorders	4	1	3
Acid base balance	2	1	1
Investigations of renal disease	4	1	3
Diarrhea and food poisoning	3	1	2
Drug induced hepatobiliary diseases	3	1	2
<b>Total</b>	<b>45</b>	<b>15</b>	<b>30</b>
<b>Credit</b>	<b>2</b>	<b>1</b>	<b>1</b>

#### **4. Teaching and Learning Methods:**

- 4.1- Lectures
- 4.2- practical lessons with performance of various extraction and detection techniques
- 4.3-Assignment
- 4.4- Attending and participating in scientific conferences, workshops and discussion to acquire the general and transferable skills.
- 4.5 Hospital visits

#### **5. Student Assessment Methods**

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.3-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
5.5-OSCE	-Practical skills, intellectual skills General transferable skills
5.5 assignment	-General transferable skills, intellectual skills

#### **Assessment Schedule**

Assessment 1 : ...Final Written exam...week (24)

Assessment 2 : ...Final OSCE ...week (24)

Assessment 3 : ...Final oral exam...week (24)

#### **Weighting of Assessments**

Final written exam	50%
Final oral exam	30%
Final OSCE	20%
<hr/>	
Total	100%



## **6. List of References**

6.1-Course notes : Lectures notes prepared by the staff members of the department.

6,2 Kumar and Clarke Textbook of Medicine; Parveen Kumar and Richard Clark; Blackwell Science; 14<sup>th</sup> edition, 2007 Hutchison's Clinical Methods; Robert Hutchison; Harry Rainy; 21<sup>st</sup> edition; 2003

6.3- Recommended Books

- Cecil Textbook of Medicine; McGraw Hill; 16<sup>th</sup> edition, 2007.
- Harrison's Textbook of Medicine, McGraw Hill, 2005.

6.4 Periodicals and websites:

## **7. Facilities Required for Teaching and Learning**

1-ADEQUATE INFRASTRUCTURE: including teaching places (teaching class, teaching halls, teaching laboratory), comfortable desks, good source of aeration, bathrooms, good illumination, and safety & security tools.

2- TEACHING TOOLS: including screens, computers including cd (rw), data shows, projectors, flip charts, white boards, video player, digital video camera, scanner, copier, colour and laser printers.

3- COMPUTER PROGRAM: for designing and evaluating MCQs

**Course Coordinator:** Dr. Mirvat Atia Abo

**Head of Department:** Prof. Dr. Hasan Ahmed Hasanen

**Date:** 18/12/2011, **Revised:** 1/9/2012, **Revised:** 1/12/2013

## Course Specification of Pathology in Forensic Medicine & Clinical Toxicology

**Sohag University**

**Faculty of Medicine**

1. Programme (s) on which the course is given: Master degree in forensic medicine & clinical toxicology
2. Major or Minor element of program: Minor.
3. Department offering the program: Dept. of Forensic Medicine & Clinical Toxicology
4. Department offering the course: Dept. of pathology
5. Academic year / Level; 1<sup>st</sup> part
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

### **A. Basic Information**

**Title:** pathology in Forensic Medicine & Clinical Toxicology

**Code:** PAT0509200

**Total hours:**

	Lectures	Practical	Tutorial	Total hours	credit
Forensic Pathology	15	30		45	2

### **B. Professional Information**

#### **1. Overall Aims of Course**

Provide essential knowledge about pathogenesis and pathologic manifestation of poisoning and injuries.

#### **2. Intended Learning Outcomes of Course (ILOs)**

##### **a) Knowledge and Understanding:**

By the end of the course, students should be able to:

- a1. Describe bases of general and systemic pathology.
- a2. Describe etiology, pathogenesis and pathologic manifestation of diseases and injuries.
- a3. Mention the progress, complications and fate of different types of injuries of human body.
- a4. List Scientific developments in the field of pathology.
- a5. Mention the ethical and legal principles of professional practice in the field of pathology.
- a6. List the principles and fundamentals of ethics and legal aspects of professional practice in the field of pathology..
- a7. List the basics and ethics of scientific research

### **b) Intellectual Skills**

By the end of the course, students should be able to:

- b1. Select from different diagnostic tool the one that can reach problem solving
- b2. Conduct research studies that adds to knowledge.
- b3. Conduct a research study and / or write a scientific study on a research problem.
- b4. Assess risk in professional practices in the field of pathology.
- b5. Plan to improve performance in the field of pathology.
- b6. Identify pathology problems and find solutions .
- b7. Analyze research and issues related to pathology.

### **c) Professional and Practical Skills**

By the end of the course, students should be able to:

- c1. Master the basic and modern professional skills in the area of pathology.
- c2. Write and evaluate pathological report .
- c3. Assess methods and tools existing in the area of pathology.

### **d) General and Transferable Skills**

By the end of the course, students should be able to:

- d1. Communicate effectively by all types of effective communication
- d2. Use information technology to serve the development of professional practice
- d3. Assess himself and identify personal learning needs.
- d4. Use different sources to obtain information and knowledge.
- d5. Develop rules and indicators for assessing the performance of others.
- d6. Work in a team, and team's leadership in various professional contexts.
- d7. Manage time Efficiently.
- d8. Learn himself continuously

### **3. Contents of the course:**

<b>Topic</b>	<b>No. of hours</b>	<b>Lecture</b>	<b>Practical</b>
1- General Pathology:	5	2	3
1.1. Cell response to injury and aging.			
1.2. Disturbances of circulation.			
2- Heart & blood vessels:	4	2	2
2.1. Ischemic heart diseases & heart failure.			
2.2. Diseases of the pericardium.			
2.3. Atherosclerosis & hypertension.			
2.4. Aneurysms.			
3- Respiratory system:	4	2	2
3.1. Lung atelectasis & collapse.			
3.2. Pulmonary hypertension			
3.3. Pulmonary edema.			
3.4. Emphysema.			

3.5. Pneumothorax & pyopneumothorax.			
4- Gastrointestinal, hepatobiliary tracts & pancreas:	7	2	5
4.1. Ulcers of the gastrointestinal tract			
4.2. Gastrointestinal bleeding.			
4.3. Intestinal obstruction.			
4.4. Cholecystitis & gall stones.			
4.5. Pancreatitis.			
4.6. Peritonitis.			
5- Diseases of the genitourinary system	7	2	5
5.1. Pyelonephritis & hydronephrosis.			
5.2. Acute tubular necrosis.			
5.3. Renal stones.			
5.4. Obstruction & calculi of urinary bladder.			
5.5. Testicular atrophy & male infertility.			
6- The musculoskeletal system:	4	1	3
6.1. Healing of bone fracture.			
6.2. Osteomyelitis.			
6.3. Arthritis.			
6.4. Myopathy			
6.5. Peripheral neuropathy.			
7- Nervous system:	7	2	5
7.1. Intracranial hemorrhage & stroke.			
7.2. Increase intracranial tension.			
8- Diseases of female genital system:	7	2	5
8.1. Uterine bleeding			
8.2. Abortion & ectopic pregnancy.			
Total	45	15	30
Credit	2	1	1

#### **4. Teaching and Learning Methods:**

- 4.1- Lectures
- 4.2- practical lessons
- 4.3-Assignment
- 4.4- attending and participating in scientific conferences, work shops and discussion to aquire the general and transferable skills.

#### **5. Student Assessment Methods**

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%	- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,
5.3-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
5.4-OSPE	-Practical skills, intellectual skills
5.5 assignment	-General transferable skills, intellectual skills

## **Assessment Schedule**

Assessment 1 : ...Final Written exam...week (24)

Assessment 2 : ....Final OSPE ...week (24)

Assessment 3 : ....Final Structured Oral Exam ...week (24)

## **Weighting of Assessments**

Final written exam	50%
Final Structured Oral Exam	30%
Final OSPE	20%
<hr/>	
Total	100%

## **6. List of References**

### **6.1-Course notes :**

Lectures notes prepared by the staff members of the department.

### **6.2- Essential Books (Text Books):**

- Muir's text book of pathology.
- Robbins pathologic basis of diseases.

### **6.3- Recommended Books:**

- Rosi & Ackerman text book of pathology.
- Sternberg text book of pathology.

### **6.4- Periodicals, American journal of pathology**

Pathology

Human pathology

Web Sites: <http://www.ncbi.nlm.nih.gov/pubmed/>

## **7. Facilities Required for Teaching and Learning**

1-ADEQUATE INFRASTRUCTURE: including teaching places (teaching class, teaching halls, teaching laboratory), comfortable desks, good source of aeration, bathrooms, good illumination, and safety & security tools.

2- TEACHING TOOLS: including screens, computers including cd (rw), data shows, projectors, flip charts, white boards, video player, digital video camera, scanner, copier, colour and laser printers.

3- COMPUTER PROGRAM: for designing and evaluating MCQs

**Course Coordinator:** Dr. Fatma Al Zahraa

**Head of Department:** Dr. Eman Muhammad Salah El Deen

**Date:** 18/12/2011, **Revised:**1/9/2012, **Revised:**1/12/2013

## Course Specifications of Applied Biostatistics (with computer use) and Research Methodology in Master degree of Forensic Medicine & Clinical Toxicology

Sohag University

Faculty of Medicine

1. Program title : Master degree in Audiology
2. Major/minor element of the program : Minor
3. Department offering the course: Community Medicine and public Health Dep.
4. Department offering the program: Forensic Medicine & Clinical Toxicology
5. Academic year /level : 1st part
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

### A. Basic Information

**Title:** Master degree in Forensic Medicine & Clinical Toxicology Statistics and Computer use for health services and Research Methodology

**Code:** COM 0509-200

**Total Hours:**

Title	Lectures	Practical/ surgical	Total	credit
Applied biostatistics and computers & Research methodology	15	30	45	2

### B. Professional Information

#### Applied Biostatistics Module:

##### 1. Overall Aims of Course

- a. To influence the students to adopt an analytical thinking for evidence based medicine.
- b. To use precisely the research methodology in researches and computer programs SPSS, Epi Info and Excel in data analysis.

#### Research Methodology Module:

##### 1. Overall Aims of Course

The aim of this course is to provide the postgraduate student with the advanced medical knowledge and skills essential for the mastery of practice of specialty and necessary to provide further training and practice in the field of Public health and Community Medicine through providing:

1. Recent scientific knowledge essential for the mastery of practice of Public Health and Community Medicine according to the international standards.
2. Skills necessary for preparing for proper diagnosis and management of community problems, skills for conducting and supervising researches on basic scientific methodology.
3. Ethical principles related to the practice in this specialty.
4. Active participation in community needs assessment and problems identification.
5. Maintenance of learning abilities necessary for continuous medical education.

6. Upgrading research interest and abilities.

## **2. Intended Learning Outcomes of Courses (ILOs)**

### **Applied Biostatistics Module:**

#### **a) Knowledge and understanding:**

By the end of the course, the student is expected to be able to:

- a1. Mention different programs of analysis of data and statistical packages
- a2. Define the recent advances of sources of data and methods of collection.
- a3. Summarize data, construct tables and graphs
- a4. Calculate measures of central tendency and measures of dispersion
- a5. Describe the normal curves and its uses
- a6. Illustrate selected tests of significance and the inferences obtained from such tests
- a7. Illustrate selected tests of significance for parametric and non parametric inferences
- a8. Identify factor analysis and discrimination analysis.

#### **b) Intellectual Skills**

By the end of the course, the student is expected to be allowed to:

- b1. Mention how to collect and verify data from different sources
- b2. Interpret data to diagnose prevalent problems clinical pathology

#### **c) Professional and Practical Skills:**

By the end of the course, the student is expected to practice the following:

- c1. Perform recent advanced technological methods in collection, analysis and interpretation of data and in management of prevalent problems in clinical pathology

#### **d) General and Transferable Skills:**

By the end of the course, the student is expected to be able to:

- d1. Use appropriate computer program packages.
- d2. Use of different sources for information and knowledge about biostatistics.

### **Research Methodology Module:**

## **2. Intended Learning Outcomes of Courses (ILOs)**

#### **a) Knowledge and understanding:**

By the end of the course, the student is expected to be able to:

- a1. Define the recent advances of screening tests pertinent to selected diseases and the at-risk approach in the application of screening tests.
- a2. Explain the usefulness of screening tests, and calculate sensitivity, specificity, and predictive values.
- a3. Describe the study design, uses, and limitations.
- a4. Mention the recent advances of principles, methodologies, tools and ethics of scientific research.
- a5. Explain the strategies and design of researches.
- a6. Describe bias and confounding.
- a7. Describe sampling techniques and list advantages of sampling
- a8. Identify principles of evidence based medicine.

#### **b) Intellectual Skills**

By the end of the course, the student is expected to be able to:

- b1. Conduct research studies that adds to knowledge.
- b2. Formulate scientific papers in the area of public health and community medicine
- b3. Innovate and create researches to find solutions to prevalent community health problems
- b4. Criticize researches related to public health and community medicine
- c) Professional and Practical Skills:**  
By the end of the course, the student is expected to be able to:
  - c1. Enumerate the basic and modern professional skills in conducting researches in the area of public health and community medicine.
  - c2. Design new methods, tools and ways of conducting researches. .
- d) General and Transferable Skills:**  
By the end of the course, the student is expected to be able to:
  - d1. Use of different sources for information and knowledge to serve research.
  - d2. Work coherently and successfully as a part of a team and team's leadership in conducting researches and field studies.

### 3. Contents

Topic	No. of hours	Lecture	Tutorial/ Practical
<b>Applied Biostatistics Module:</b>			
Recent advances in collection, analysis and interpretation of data	3	1	2
-Details of Tests of significance: Proportion test	3	1	2
-Chi-square test	1.5	.5	1
-Student T test	1.5	.5	1
-Paired T test	1.5	.5	1
-Correlation	1.5	.5	1
-Regression	2	1	1
-ANOVA test	3	1	2
-Discrimination analysis	3	1	2
-Factor analysis	3	1	2
-Parametric and non parametric tests	4.5	.5	4
<b>Research Methodology Module:</b>			
Details of epidemiological studies (case control, cohort and cross sectional )	3	1	2
Clinical trials, Quasi experimental study	3	1	2
Bias and errors	2	1	1
Setting a hypothesis	1.5	.5	1
Recent advances in screening	1.5	.5	1
- Evidence – based Medicine: Concept and examples Applicability Scientific writing: A protocol A curriculum	3	1	2
Setting an objective - Critical thinking	2	1	1
Formulation of papers	1.5	.5	1
<b>Total hours</b>	<b>45</b>	<b>15</b>	<b>30</b>



<b>Total Credit hours</b>	<b>2</b>	<b>1</b>	<b>1</b>
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#### **4. Teaching and Learning Methods**

- 4.1- Lectures
- 4.2- Practical sessions
- 4.3- Computer search assignments
- 4.4- Computer application

#### **5. Student Assessment Methods**

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2-Written Exams:	- Knowledge
-Short essay: 40%	- Knowledge
-structured questions: 25%	- Knowledge, intellectual skills
-MCQs: 20%	- Intellectual skills, General transferable skills,
-Commentary, Problem solving: 15%	- Practical skills, intellectual skills
5.3-Structured Oral Exams	- Knowledge
5.4Computer search assignment	- general transferable skills, intellectual skills

#### **Assessment Schedule**

- Assessment 1...Final written exam      Week: 24
- Assessment 2....Final oral exam      Week: 24
- Assessment 3    Attendance and absenteeism throughout the course
- Assessment 4    Computer search assignment performance throughout the course

#### **Weighting of Assessments**

Final-term written examination	50%
Final oral Examination	50%
Total	100%

Formative only assessments: attendance and absenteeism and Computer search assignments performance.

#### **6. List of References**

##### **Applied Biostatistics Module:**

##### **6.1- Essential Books (Text Books)**

1-Maxy-Rosenau Public health and preventive medicine, Prentice – Hall International Inc

##### **6.2- Recommended Books**

- 1- Dimensions of Community Health, Boston Burr Ridge Dubuque.
- 2- Short Textbook of preventive & social Medicine Prentice-Hall International Inc.
- 3-Epidemiology in medical practice, 5<sup>th</sup>ed Churchill Livingstone New York, London and Tokyo

##### **6.3- Periodicals, Web Sites, etc**

- 1-American Journal of Epidemiology
- 2-British Journal of Epidemiology and Community Health
- 3- WWW. CDC and WHO sites

##### **Research Methodology Module:**

##### **6.1- Essential Books (Text Books)**

1-Maxy-Rosenau Public health and preventive medicine, Prentice – Hall International Inc

##### **6.2- Recommended Books**

- 1- Dimensions of Community Health, Boston Burr Ridge Dubuque.
- 2- Short Textbook of preventive & social Medicine Prentice-Hall International Inc.
- 3- Epidemiology in medical practice, 5<sup>th</sup> edition. Churchill Livingstone. New York, London and Tokyo

**6.3- Periodicals, Web Sites, etc**

- 1-American Journal of Epidemiology
- 2-British Journal of Epidemiology and Community Health
- 3-WWW. CDC and WHO sites

**7. Facilities Required for Teaching and Learning:**

**Applied Biostatistics Module:**

- Adequate conditioned space for staff and assistants.
- Adequate conditioned teaching facilities.
- Audiovisual Aids: Data show, overhead and slide projectors and their requirements.

**Research Methodology Module:**

- ADEQUATE INFRASTRUCTURE: including teaching places (teaching class, teaching halls, teaching laboratory), comfortable desks, good source of aeration, bathrooms, good illumination, and safety & security tools.
- TEACHING TOOLS: including screens, computers including cd (rw), data shows, projectors, flip charts, white boards, video player, digital video camera, scanner, copier, color and laser printers.

**Course Coordinator:** Dr/ Ahmed Fathy Hamed

**Head of Department:** Prof/ Eman Abd El-Baset Mohammed

**Date:** 18-12-2011, **Revised:** 1/9/2012

## Course Specification of Forensic Medicine and Injuries & infirmities in Forensic Medicine & Clinical Toxicology

Sohag University

Faculty of Medicine

1. Programme (s) on which the course is given: Master degree in forensic medicine & clinical toxicology
2. Major or Minor element of program: Major
3. Department offering the program: Dept. of Forensic Medicine & Clinical Toxicology
4. Department offering the course: Dept. of Forensic Medicine & Clinical Toxicology
5. Academic year / Level; 2<sup>nd</sup> part
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013

### **A. Basic Information**

**Title:** Forensic Medicine and injuries & infirmities in Forensic Medicine & Clinical Toxicology

**Code:** FOR 0509-200

**Total hours:**

Module	Lectures	Practical	Tutorial	Total hours	credit
Forensic medicine	105	150	-----	255	12
Injuries and infirmities	60	60	-----	120	6
Clinical Toxicology	60	90	-----	150	7

### **B. Professional Information**

#### **1. Overall Aims of Course**

#### **Forensic medicine module :**

Provide basic knowledge of different types of injuries and how to diagnose death and differentiate between natural and criminal causes. . Also he/she can diagnose injuries and determine the percent of permanent infirmity accurately. The student should also be able to examine the scene of the crime and write a medicolegal report independently.

#### **Injuries and infirmities module :**

Provide basic knowledge of different types of injuries and toxins which can cause permanent infirmity. The student should be able to examine the injured person and determine the percent of permanent infirmity accurately. Write a medicolegal report about work injuries independently.

#### **Clinical Toxicology module:**

Provide basic knowledge of different types of poisonous substances and drug. Demonstration of knowledge of types, actions, clinical features, circumstances, diagnosis, detection, and management of poisoning which operate on the human body. demonstrate the criteria, clinical features, diagnosis and general

management of dependence producing substances and drugs

## **2. Intended Learning Outcomes of Course (ILOs)**

### **Forensic medicine module :**

#### **a) Knowledge and Understanding:**

By the end of the course, students should be able to:

- a1. Mention types and procedure for forensic autopsy.
- a2. Describe how to examine the scene of death and diagnose death
- a3. Demonstrate the pathophysiology of death, postmortem changes, and decomposition
- a4. Demonstrate knowledge of abuse of human rights ; deaths in custody.
- a5. Explain the medico legal aspects of suffocation and asphyxial deaths.
- a6. Explain the medico legal aspect of deaths associated with surgical procedures.
- a7. Describe principles and medico legal aspects of personal identification of living and dead human bodies
- a8. Mention the pathology of wounds and different types of injuries in human body
- a9. Explain types of head and spinal injuries
- a10. Explain types of chest and abdominal injuries
- a11. Explain self inflicted injury
- a12. Explain medicolegal aspects of firearm injuries and explosion deaths
- a13. Demonstrate transportation injuries .
- a14. Explain the medicolegal aspects of neglect, starvation and hypothermia
- a15. Explain medicolegal aspect of sexual crimes and child abuse.
- a16. Explain the medicolegal aspects of pregnancy, delivery , abortion.
- a17. Explain medicolegal aspects of infanticide and sudden death in infancy. a-18  
Explain the medicolegal aspect of dysbarism and barotrauma..
- a18. Explain forensic serology that deals with different body fluids
- a19. List Scientific developments in the field of forensic medicine .
- a20. Describe Scientific developments in the field of forensic medicine .
- a21. Mention the ethical and legal principles of professional practice in the field of forensic medicine .
- a22. Mention the principles and fundamentals of ethics and legal aspects of professional practice in the field of forensic medicine.
- a23. List the basics and ethics of scientific research

#### **b) Intellectual Skills**

By the end of the course, students should be able to:

- b1. Interpret the features of the scene of the crime in the field of forensic medicine and clinical toxicology for proper diagnosis of forensic cases.
- b2. Select from different diagnostic alternatives the ones that help reaching a final diagnosis for forensic medicine.
- b3. Analyze features of a case study of injuries or criminal deaths. to solve the problem
- b4. Conduct a research study and / or write a scientific study on a research
- b5. Assess risk in professional practices in the field of forensic medicine.
- b6. Plan to improve performance in the field of forensic medicine .
- b7. Identify forensic problems and find solution
- b8. Analyze research and issues related to the forensic medicine .

**c) Professional and Practical Skills**

By the end of the course, students should be able to:

- c1. Examine and write medicolegal report on bone and soft tissue specimens on the museum.
- c2. Examine criminal deaths and perform autopsy.
- c3. Write and evaluate standard medico-legal report of injured person.
- c4. Evaluate and develop methods and tools existing in the area of forensic medicine .

**d) General and Transferable Skills**

By the end of the course, students should be able to:

- d1. Communicate with each other's and interact effectively and ethically with injured person then write a report about the case and discuss it with staff members
- d2. Manipulate computer programs, do web search, to write an essay about recent subjects of forensic medicine with trial of solving
- d3. Assess himself and identify personal learning needs.
- d4. Use of different sources for information and knowledge
- d5. Develop rules and indicators for assessing the performance of others.
- d6. Work in a team, and team's leadership to perform some laboratory tests for personal identification or to perform autopsy.
- d7. Manage time Efficiently.
- d8. Present reports orally about forensic cases in accordance with the standard scientific guidelines in seminars or group meetings, discuss results, defend his/her ideas with staff members.

**Injuries and infirmities module :**

**a) Knowledge and Understanding:**

By the end of the course, students should be able to:

- a1. a1- Explain and define permanent infirmity
- a2. Describe different types of injuries which can cause permanent infirmity
- a3. Describe different types of poisons which can cause permanent infirmity
- a4. Describe different types of injuries to which the worker can be exposed during his work.
- a5. Describe different types of toxins to which the worker can be exposed during his work.
- a6. Describe how to examine the injured person
- a7. Describe how to examine the poisoned person
- a8. Explain how to determine the percent of permanent infirmity
- a9. Mention the ethical and legal principles of professional practice in the field of forensic medicine and clinical toxicology
- a10. List the principles and fundamentals of quality in professional practice in the in the field of forensic medicine and clinical toxicology
- a11. List the basics and ethics of scientific research in the field of forensic medicine and clinical toxicology

**b) Intellectual Skills**

By the end of the course, students should be able to:

- b1. Interpret the features of the scene of the crime in the field of forensic medicine and clinical toxicology for proper diagnosis of forensic cases.

- b2. Select from different diagnostic alternative the ones that help reaching a final diagnosis for forensic and toxicology cases.
- b3. Link between knowledge for Professional problems' solving.
- b4. Conduct a research study and / or write a scientific study on a research
- b5. Identify the degree of injury or toxicity to determine the percent of permanent infirmity.
- b6. Analyze researches and issues related to injuries & permanent infirmities

**c) Professional and Practical Skills**

By the end of the course, students should be able to:

- c1. Describe the basic and modern professional skills in the area of forensic medicine .
- c2. Write and evaluate standard medico-legal report of injured or intoxicated person

**d) General and Transferable Skills**

By the end of the course, students should be able to:

- d1. Communicate with each other's and interact effectively and ethically with patients presenting with signs of poisoning or injury in the admission units of the hospitals then write a report about the case and discuss it with staff members
- d2. Manipulate computer programs, do web search, to write an essay about different types of work injuries or toxicity.
- d3. Use of different sources for information and knowledge
- d4. Develop rules and indicators for assessing the performance of others.
- d5. Work in a team, and team's leadership in various professional contexts.
- d6. Present orally reports about injury or intoxicated person in accordance with the standard scientific guidelines in seminars or group meetings, discuss results, defend his/her ideas with staff members. Students can recognize and accept the limitations in their knowledge and clinical skills.

**Clinical Toxicology module:**

**a) Knowledge and Understanding:**

By the end of the course, students should be able to:

- a1. List the analytical and instrumental methods used in investigating crimes
- a2. Describe principles of extraction of various drugs or poisons from body fluids and the keratinized tissues .
- a3. Describe principles of toxicology of different types of poisonous substances and drugs including classification, mechanism of action and clinical features of toxicity.
- a4. Explain designer drugs
- a5. Describe basic knowledge of poisonous arthropods, mushrooms, poisonous plants and toxic marine life .
- a6. Explain natural hallucinogens .
- a7. Explain toxicity of centrally active drugs .
- a8. Explain analgesics as acetaminophene salicylate, non steroidal anti-inflammatory drug toxicity.
- a9. Demonstrate toxicity of muscle relaxants.
- a10. Demonstrate vitamins toxicity.
- a11. Demonstrate knowledge of toxicity of heavy metals and inorganic agents
- a12. Describe pesticides poisoning
- a13. Describe inhalation poisoning, volatiles and solvents

- a14. Describe corrosives poisoning.
- a15. Describe toxicity of cosmetics , toilet articles, baby powder, and camphor
- a16. Describe examination the scene of death in cases of poisoning
- a17. List chemicals and drugs which induce organ toxicity.
- a18. Explain toxins that affect the cardiovascular system.
- a19. Explain chemicals and drugs which induce hepatic and renal toxicity .
- a20. Explain toxic injury of the eye .
- a21. Demonstrate endocrine agent toxicity .
- a22. Demonstrate knowledge of geriatric toxicology.
- a23. Demonstrate the criteria, clinical features, diagnosis and general management of dependence producing substances and drugs
- a24. Describe principles of pediatric resuscitation in cases of toxicity.
- a25. Describe principles of management of overdose in pregnancy
- a26. Explain how to manage the respiratory complications in poisoned patient
- a27. Mention the antidotal studies and evaluation of toxicity in human subjects.
- a28. List the general scheme for testing drugs or poisons
- a29. Describe Scientific developments in the field of clinical toxicology
- a30. Mention the ethical and legal principles of professional practice in the field of clinical toxicology
- a31. Mention the principles and fundamentals of ethics and legal aspects of professional practice in the field of clinical toxicology.
- a32. List the basics and ethics of scientific research

#### **b) Intellectual Skills**

By the end of the course, students should be able to:

- b1. Interpret the features of the scene of the crime in the field of forensic medicine and clinical toxicology for proper diagnosis of toxicology cases
- b2. Select from different diagnostic alternative the ones that help reaching a final diagnosis for clinical toxicology.
- b3. Interpret features of a case study of poisoning to solve the problem and formulate treatment plan.
- b4. Conduct a research study and / or write a scientific study on a research problem.
- b5. Assess risk in professional practices in the field of clinical toxicology.
- b6. Plan to improve performance in the field of clinical toxicology.
- b7. Identify of clinical toxicology problems and find solution
- b8. Analyze research and issues related to clinical toxicology.

#### **c) Professional and Practical Skills**

By the end of the course, students should be able to:

- c1. Perform some chemical tests on labs to identify some poisons
- c2. Write and evaluate standard medico-legal report of intoxicated person through interpretation of history, clinical examination and laboratory test findings
- c3. Evaluate and develop methods and tools existing in the area of clinical toxicology.

#### **d) General and Transferable Skills**

By the end of the course, students should be able to:

- d1. Communicate with each others and interact effectively and ethically with patients presenting with signs of poisoning in the admission units of the hospitals then write a report about the case and discuss it with staff members
- d2. Manipulate computer programs, do web search, to write an essay about recent subjects of toxicology or worldwide problems related to toxicology, with trial of solving.
- d3. Assess himself and identify personal learning needs.
- d4. Use of different sources for information and knowledge
- d5. Develop rules and indicators for assessing the performance of others.
- d6. Work in a team, and team's leadership to perform some laboratory tests for detection of some poisons.
- d7. Manage time Efficiently. d-8 Present reports orally about toxicological cases in accordance with the standard scientific guidelines in seminars or group meetings, discuss results, defend his/her ideas with staff members. Students can recognize and accept the limitations in their knowledge and clinical skills.

### **3. Contents of the course:**

#### **Forensic medicine module :**

<b><u>Topic</u></b>	<b><u>No.hours</u></b>	<b><u>lectures</u></b>	<b><u>practiel</u></b>
Types of autopsy and procedure for forensic autopsy	10	4	6
Examination the scene of death	10	4	6
Post mortem artifact	10	4	6
The pathophysiology of death,	10	4	6
The pathology of sudden death	8	2	6
The obscure death	10	4	6
The medicolegal aspects of personal identification	8	4	4
The pathology of wounds, chest and abdominal injuries, self inflicted injury, head and spinal injuries and how to write a medicolegal report	12	4	8
The medicolegal aspects of firearm injuries and explosion deaths	10	4	6
The systemic effect of trauma	10	4	6
Transportation injuries	12	6	6
Abuse of human rights: deaths in custody	11	5	6
Burn and scold	8	2	6
Electrical fatalities	12	6	6
The medicolegal aspects of suffocation and asphyxia	9	3	6
Fatal pressure on the neck	11	5	6
Immersion deaths	4	2	2
The medicolegal aspects of neglect, starvation and hypothermia	12	6	6
The medicolegal aspects of pregnancy, delivery	10	4	6
The medicolegal aspects of abortion	10	4	6
Infanticide and sudden death in infancy	10	4	6
The medicolegal aspect of sexual crimes	10	4	6



The medicolegal aspect of child abuse	10	4	6
The medicolegal aspect of deaths associated with surgical procedures	6	4	2
Forensic serology including: examination of blood, semen, saliva and other body fluids	4	2	2
The medicolegal aspect of dysbarism and barotraumas	8	6	2
Forensic Psychiatry	10	4	6
<b>Total hours</b>	<b>255</b>	<b>105</b>	<b>150</b>
<b>Credit</b>	<b>12</b>	<b>7</b>	<b>5</b>

### Injuries and infirmities module :

الموضوع	عدد الساعات النظرية	عدد الساعات العملية	الساعات المعتمدة
تعريف العاهة المستديمة و أنواعها	10	10	
كيفية تقدير درجات العجز في حالات فقد العضوي	20	20	
إصابات العمل	10	10	
كيفية تقدير درجات العجز الناشئة عن إصابات العمل	20	20	
<b>المجموع</b>	<b>60</b>	<b>60</b>	<b>6</b>

### Clinical Toxicology module:

Clinical neurotoxicology topic	No. of hours	Lecture	Practical
Chemical hepatic injury and renal toxicity poisoning	5 7	2 3	3 4
Hematologic consequences of poisoning	8 5	2 1	6 4
Toxic injury of the eye	5	3	2
pediatric resuscitation and fluid management	4	2	2
Endocrine agent toxicity	5	3	2
management of overdose III	5	2	3
Geriatric toxicology	6	3	3
Disaster management of massive toxic exposure	4	2	3
Poisonous arthropods, mushrooms, poisonous plants, toxic marine life , botulism and food poisoning	8	2	4
Designer drugs	4	2	2
Drug dependence	9	2	4 5
Natural hallucinogens	5	2	3

Toxicity of centrally active drugs as: sedatives, tricyclic antidepressants,	5	3	2
Analgesics	4	2	2
Toxicity of muscle relaxants	6	2	4
Toxicity of vitamins	4	2	2
Toxicity of heavy metals and inorganic agents	4	2	2
Pesticides poisoning	8	2	6
Inhalation poisoning, volatiles and solvents	7	3	4
Corrosives	7	3	4
Cosmetics, toilet articles, baby powder, and camphor	4	2	2
<b>Total hours</b>	<b>150</b>	<b>60</b>	<b>90</b>
<b>Credit</b>	<b>7</b>	<b>4</b>	<b>3</b>

#### **4. Teaching and Learning Methods:**

4.1- Lectures

4.2- Practical sessions with demonstration of specimens, photographs, x-rays, microscope slides in department museums .

4.3- Assignment

4.4- attending and participating in scientific conferences work shops and discussion to acquire the general and transferable skills.

4.5 Field training

#### **5. Student Assessment Methods**

Method of assessment	The assessed ILOs
5.1- Observation of attendance and absenteeism.	- General transferable skills, intellectual skills
5.2- Log book	- General transferable skills
5.3- Written Exam: - Short essay: 40% - structured questions: 25% - MCQs: 20% - Commentary, Problem solving: 15%	- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills.
5.4- Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
5.5- OSPE	- Practical skills, intellectual skills
5.6 Computer search assignment	- General transferable skills, intellectual skills

#### **Assessment Schedule**

Assessment 1: Log book .....week (80)

Assessment 2 : ....Final Written exam...week (96)

Assessment 2 : ....Final OSPE ...week (96)

Assessment 2 : ....Final oral exam...week (96)

### **Weighting of Assessments**

Review ....	week 28-30= pass
Final Written exam	50%
Final oral exam	30%
Final OSPE	20%

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Total	100%
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Formative only assessment: simple research assessment, Log book, attendance and absenteeism

### **6. List of References**

6.1-Course notes : Lectures notes prepared by the staff members of the department

6.2-Essential Books:

- Simpson's Forensic Medicine by Knight, B (1990)
- Medical ethics. by Jones & Barlett

6.3-Recommended Books:

6.4-Periodicals and websites:

Forensic Science International, Egyptian Journals of Forensic Medicine and Clinical

Toxicology, International Journals of Forensic Medicine and Clinical Toxicology

[www.sciencedirect.com](http://www.sciencedirect.com)

### **7. Facilities Required for Teaching and Learning**

1-ADEQUATE INFRASTRUCTURE: including teaching places (teaching class, teaching halls, teaching laboratory), comfortable desks, good source of aeration, bathrooms, good illumination, and safety & security tools.

2- TEACHING TOOLS: including screens, computers including cd (rw), data shows, projectors, flip charts, white boards, video player, digital video camera, scanner, copier, colour and laser printers.

3- COMPUTER PROGRAM: for designing and evaluating MCQs

**Course Coordinator:** Dr. Soheir Ali Mohamed

**Head of Department:** Dr. Maha Abdel Hameed Hilal

**Date:** 18/12/2011, **Revised:**1/9/2012, **Revised:**1/12/2013