



Suez Canal University
Faculty of Medicine



Forensic Medicine and
Clinical Toxicology Department
Program Specification- MD

Programme Specification

Programme Title:

***Doctorate Degree of Forensic
Medicine and Toxicology***

Code:

FTFT



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Program Specifications:

1. **Program Title:** Doctorate degree of Forensic Medicine and Toxicology.
2. **Major or minor element of the Program:** Major.
3. **Department offering the Program:** Forensic Medicine and Clinical Toxicology.
4. **Academic level:** Post Graduate Studies.
5. **Coordinator:** Prof. Abeer M. Hagra
6. **External Evaluator(s):** Prof. Prof. Dina Ali Shokry, Prof. Maha Abdelhamied Ghanem
7. **Date of specification approval:** The bylaws of the Doctorate program in Forensic Medicine and Toxicology in the Faculty of Medicine, Suez Canal University were approved by the Supreme Council of Universities in 2016.
8. **Date of specification revision approval:** 2017.
9. **Number of credit points for this degree:** 180 CP

Professional Information

1. Program Aims:

The overall goals of the program are to develop the candidate with the following characteristics:

1. A Clinical toxicologist (CT) capable of communicating as a medical consultant to other clinicians and to patients, as well as being capable of optimally directing the management of the clinical laboratory enterprise. The CT understands the science and technology of the clinical toxicological laboratory and assures the quality, clinical appropriateness, and usefulness of the data produced by that laboratory.
2. A candidate who understands and consults on methods of diagnostic toxicological test development, test utilization in the context of both generally applicable as well as patient-specific clinical settings, and assay interpretation in the acute and chronic clinical management of patients. These activities include the CT's role in the development and implementation of integrated medical informatics that optimize patient care.
3. A candidate who understands methods and implementation of clinical laboratory-based therapeutics, including minimally manipulated and engineered cellular therapy.
4. A candidate who has the skills to consult in these areas at the broader systems level, and in the various extant healthcare delivery models.



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5. A candidate who understands the role of research, in its broadest definition, in clinical decision-making, test development, knowledge generation, and continuing education.
6. A candidate of forensic medicine who can interpret the medico-legal problems that can face them in their practice.
7. The forensic physician who can deal with the medico-legal reports and can criticize them adequately.

2. Intended Learning Outcomes (ILOs):

a. Knowledge and Understanding:

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

- a1. Be able to use all relevant information resources to acquire and describe evidence-based information. Identify proficiency in evaluating and presenting findings from appropriate peer-reviewed journals.
- a2. Recognize and maintain a knowledge base in the basic and clinical sciences necessary for effective consultation in toxicological laboratory medicine.
- a3. Recognize sufficient knowledge to determine clinically optimal yet cost-effective testing.
- a4. Recognize the unique aspects of toxicological practice as modified by patient age and other patient population characteristics, especially aspects of pediatric and geriatric practice.
- a5. Describe awareness and understanding of proficiency programs.
- a6. Describe the ability to optimize the performance of the forensic physicians to reach the final cause of death in criminal cases
- a7. Demonstrate knowledge of the principles of clinical research design, implementation, and interpretation. Understand the various levels of evidence in medicine and their translation into evidence-based practice.
- a8. Revise the details of medico-legal aspects of death and identify the advanced techniques in determining the cause and the time of death.
- a9. Identify the applications of routine and advanced diagnostic imaging techniques in Forensic Medicine & Toxicology.
- a10. Explain medico-legal issues related to trauma, crimes against human beings and other medico-legal problems.
- a11. Explain the use of dental evidences in relevant medico-legal situations.
- a12. Recognize the essential as well as recent mechanisms through which the different toxicants can affect the structure and function of different organs in poisoned patients.



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a13. Describe and demonstrate adherence to safe working procedures in the field of forensic toxicology.

a14. Be able to arrange a study that can be used to validate methodologies and parameters of clinical utility for the implementation and continuing use of new evidence-based analytes in the local setting.

b. Intellectual Skills:

Graduate must deduce difficult medico-legal problems as they emerge in the community and work to resolve them.

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

- b1. Apply his knowledge to accurately observe and document medico-legal findings.
- b2. Select appropriate techniques for investigation of physical evidence.
- b3. Construct medico-legal decisions based on evidence.
- b4. Consult with other experts to help interpret difficult evidences found at crime scenes
- b5. Interpret important medico-legal aspects of death due to natural and unnatural conditions and poisonings.
- b6. Analyze and interpret autopsy findings in determining time and cause of death.
- b7. Apply competently the use of DNA typing, forensic anthropology and other new techniques in identification.
- b8. Evaluate different phenomena in producing wounds as well as circumstances and complications of different types of injuries.
- b9 - Appropriately interpret imaging findings in various toxicological & medico-legal cases.
- b10. Appropriately interpret circumstantial evidences of poisoning as well as analytical results .in a meaningful, structured manner in the context of casework
- b11. Create an appropriate management plan for difficult poisoning scenarios.
- b15. Critically review published literature on different medico-legal and toxicological problems and produces an accurate and balanced synthesis.

c. Professional and Practical Skills

Graduate must show competency in skills required for toxicological, medico-legal, autopsy, imaging, laboratory and research services.

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

- c 1- Examine accurately different types of physical evidence at the crime scene and ensure integrity of forensic evidence collection by the team he is leading.
- c2-Demonstrate strong investigative and technical skills at the crime scene.
- c3-Prepare reports and presentations of findings at the crime scene.



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- c4- Perform a competent medico-legal autopsy and collect appropriate evidence pertaining to cause/ mode/ manner of death and identification of the deceased
- c5- Demonstrate effective skills in identification of living/dead persons and human remains and in reconstruction of individual traits (age, sex, size, etc.)
- c6- Construct reports on difficult medico-legal and toxicological cases.
- c7- Review and appraise medico-legal and toxicological reports written by others/juniors.
- c8- Solve different medico-legal problems using dental evidences
- c9- Diagnose crimes violating the human rights.
- c10- Demonstrate competence in advanced diagnostic technology in Forensic medicine and Toxicology.
- c11- Perform a competent toxicological examination of critically ill patients to diagnose and manage different types of poisons: drugs, substance of abuse, natural and environmental toxins.
- c12- Demonstrate adherence to safe working procedures in practicing physical evidence collection, preservation and handling in relation to forensic toxicology
- c13- Diagnose and manage difficult cases of acute and chronic poisoning in special groups of population.
- c14- Cope in research studies that add to the existing specialty knowledge through creativity & innovation.
- c15- Apply the ethics and law applicable to scientific research.
- c16- Write and Publish scientific papers in ranked journals.
- c17- Respect the codes of medical ethics consistent with national health policy and law.
- c18- Supervise others and give advice in management of ethical dilemmas.
- c19- Share in committees/ teams that discuss and give decisions in difficult and controversial ethical dilemmas.

d- General and Transferable Skills:

Graduate must be proficient in the use of information technology to improve his/her and others professional practice

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

- d1- Use computer methods to produce reports, analyze and process data, retrieve and collate information.
- d2- Demonstrate proper teaching skills and help others in using library, on-line and other toxicological and Forensic Medicine resources to gather evidence-based scientific information.
- d3- Be competent as a trainer, researcher and leader in the field.
- d4- Conduct efficiently practical and clinical sessions and present data in a scientific way.
- d5- Manage time appropriately.
- d6- Construct development plans for self and subordinates according to the determined needs.



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d7- Write appraisal reports for junior staff.

d8-Ensure implementation of work policies and regulations.

d9- Be creative of new ways of describing,analyzing or explaining aspects of the specialty through lectures, writing or the media.

3. Academic Standards:

- National Academic Reference Standards (NARS)
- Comparison of Provision to External References (attached)

4. Curriculum Structure and Contents:

The program consists of **First part 30 CP, Thesis 50 CP, and Second part 100 CP**

The first part of the program: 30 CP, its duration (15 weeks) for one academic semester. The first part comprises the following:

- a. A course in Statistics & Research Methodology is planned and held in the Community Medicine Department of the Faculty of Medicine, Suez Canal University. This part includes **8 CP**.
- b. Two electives each one has **2 CP**. The students should select one elective which has not been selected in the MD Degree.
- c. The specialized courses in biomedical ethics planned and held in the Forensic Medicine and Clinical Toxicology Department. It includes **9 CP**.
- d. The specialized courses in General Toxicology, planned and held in the Forensic Medicine and Clinical Toxicology Department. It includes **9 CP**.

MD thesis: 50 CP, no scores for thesis. The candidate has the right to register his/her thesis protocol after 6 months from the degree registration. The first time for thesis defense after 6 months from the date of the faculty council approval on the thesis protocol and passing the first part exam.

The second part of the program: 100 CP, its duration (75 weeks) for 5 consecutive academic semesters. The second part comprises the specialized courses in Forensic Medicine and Clinical Toxicology planned and held in the Forensic Medicine and Clinical Toxicology Department. This part lasts for 2 years ending by written and practical exams.

5. Program Courses:

5.1- Level/Year of Program: 1st part MD (30 CP)

a. Compulsory



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*E: Student should select one course of the following as an elective course: One elective course has 2 CP.

**Every credit point equal 20 marks

b. Elective

E01	Evidence Based medicine	(Community Department)
E02	Scientific Writing	(Medical Education Department)
E03	Quality in Medical Education	(Medical Education Department)
E04	Infection Control	(Microbiology Department)
E05	Critical Appraisal	(Community Department)
E06	Communication Skills	(Medical Education Department)

Courses			Assessment				
Code No.	Course Title	No. of Credit points	Written Exam			Oral exam	Practical or clinical Exam
			No of Papers	Duration	Marks		
RBs	Research methodology and Biostatistics	8	1	3 hours	160		
FTFT51	Medical responsibility, Biomedical ethics and laws regulating the medical profession	9	1	3 hours	135	45	
FTFT52	Basics of Toxicology	9	1	3 hours	135	45	
E	Two Elective courses*	2+2	1+1	1 hour+1 hour	40+40		
Total			30 credit points			600 marks**	

5.2- Level/Year of Program: 2nd part MD (Compulsory) (100 CP)

Courses			Assessment					
Code No.	Course Title	No. of Credit points	Written Exam			Oral exam	Practical or clinical Exam	Continues assessment *(Portfolio)
			No of papers	Duration	Marks			
FTFT53	• Forensic Medicine	40	1	3 hours For each paper	360 for each paper	180	360	540
	• Special Toxicology	40	1					



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	• Practical training Auropsy	10						
	***Scientific activities	10 (not included in the total marks)						
Total		100 credit points			2400**marks			

*Portfolio scores distributed in the different parts of the portfolio and its total score included among the total mark of the second part

**Every credit point equal 20 marks

***Scientific activities are not included in the total marks

5.3- Thesis: Senior & junior faculty members from the department staff are nominated by the department council to supervise a candidate thesis work. The supervisors help the candidate in preparing the proposal of the thesis after the selection of a topic that match the research plans of the department, college & University. Data collection, methodologies, study question, time table, ethical considerations and budget are formulated by the candidate under guidance of his supervisors. The research protocol is discussed in one of the department councils to be approved and diverted to the Faculty research committee where it is subjected to a critical appraisal to meet the research basic standards set by the committee. The final approval of the research protocol is then issued by the committee of post graduate studies, the Faculty and University Council to be registered. The candidate has the right to register his/her thesis protocol after 6 months from the degree registration. The first time for thesis defense after 6 months from the date of the faculty council approval on the thesis protocol and passing the first part exam.

6. Program Admission Requirements:

- The program accepts candidates with Bachelor degree in Medicine and Surgery with minimum good grade & very good.
- Registration for the program opens two times/ year, according to the internal bylaws for postgraduate studies of the Faculty of Medicine, Suez Canal University.



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7. Student Assessment Methods

- 7.1 Written to assess the cognitive domain.
- 7.2 Oral to assess higher cognitive and attitude domains.
- 7.3 Practical to assess practical skills.
- 7.4 Portfolio to assess the cognitive, psychomotor and the affective domains

8. Weighting of Assessments

Total marks for MD degree 1800

Second part (100 credit points including 10 credit points not included in the total marks =1800 mark)	
• Oral exam	180
• Practical exam	360
• Written exam	720
• Portfolio	540
Total	1800

9. Regulations for Progression and Program Completion:

- The regulations for program completion follow the general regulations of Dotorate degree of Forensic Medicine and Toxicology in the Faculty of Medicine, Suez Canal University approved by the Supreme Council of Universities. The program in considered complete with the accomplishment of 2 summative assessments (for the first and the second parts) and the defense of a thesis developed and submitted for the purpose of acquiring the degree.
- **First part**
- Passing level 60% of total marks of the exam and at least 50% passing level of the total written exam marks
- **Second part**
- Passing level 60% of total marks of the exam
- Passing level 60% total of practical and oral exam

Thesis

Passing the thesis defense is a prerequisite for getting MD. Degree.



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10. Evaluation of Program Intended Learning Outcomes (ILOs)

Evaluator	Tool	Sample
1- Postgraduate students	Needs assessment questionnaires	Random sample of participants
2- Alumni	Self-administered questionnaires	Comprehensive sample
3-External Evaluator(s) (External Examiner(s))	External audit of the program specifications	
4- Other		

11. List of References:

11.1- Essential books:

1. Haddad-and-Winchester's Clinical-Management of Poisoning and Drug Overdose-4th-Edition
2. Goldfrank's Toxicologic emergencies. 11th Edition, Kindle Edition.
3. Knight, B.: Forensic Pathology. 4th ed.
4. Parikh's Textbook of Medical Jurisprudence & Toxicology.

11.2- Recommended books:

1. Emergency toxicology / edited by Peter Viccellio; [section editors], Tod Bania
2. Professionalism and Ethics Handbook for residents

11.3- Web sites:

<https://www.amazon.com/Winchesters-Clinical-Management-Poisoning-Overdose/dp/0721606938>

12. Facilities Required for Teaching and Learning:

- Library - Mortuary - PC - Data show - CDs - Internet

Head of Department: Prof. Abeer Mohamed Hagrass

Date: