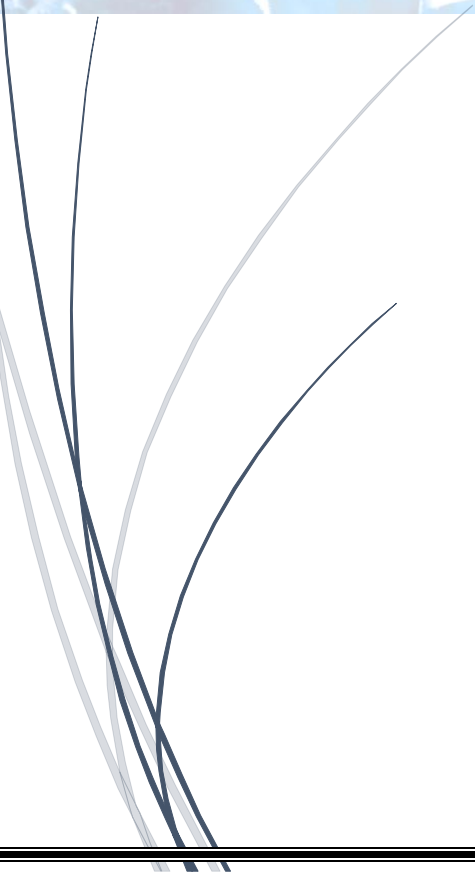


توصيف برنامج الدكتوراة

جامعة بنها

قسم الطب الشرعى و السموم الاكلينيكية





توصيف برنامج الدكتوراة الطب الشرعى و السموم الأكلينيكية

جامعة بنها
كلية الطب البشرى
قسم الطب الشرعى و السموم الأكلينيكية

توصيف برنامج الدكتوراة الطب الشرعى و السموم الأكلينيكية
(عام ٢٠٢٢-٢٠٢٣)

Basic information : * معلومات أساسية :

١ - اسم البرنامج : M.D. in Forensic Medicine & Toxicology

٢ - طبيعة البرنامج : Single

٣- القسم المانح للدرجة: الطب الشرعى و السموم الأكلينيكية

• الأقسام المشتركة فى البرنامج: الباثولوجيا، الأمراض الباطنة، طب المجتمع والبيئة و طب الصناعات.

٤- تاريخ إقرار البرنامج فى مجلس القسم : ٢٠٢٢ / ٩ / ٨

٥- تاريخ إقرار البرنامج فى مجلس الكلية: ٢٠٢٢ / ٩ / ١٥

٦- منسق البرنامج: Prof. /Abdelmonem G. Madboly

٧- المراجعة الداخلية للبرنامج: Prof. Mohammed Elshishtawy

٨- المراجعة الخارجية للبرنامج: Prof. Dina Shokry; Professor of Forensic Med. & Clin. Toxicology, Cairo University

Professional information : * معلومات متخصصة :

١ - الأهداف العامة للبرنامج :

1- Program aims:

The overall aims of the program are to:

1.1. Acquire Detailed and advanced knowledge and skills necessary for



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practicing and adding new concepts in forensic medicine, and clinical toxicology.

- 1.2. **Integrate** the medical data of forensic medicine and toxicology properly in the service of justice.
- 1.3. **Accept** decision making capabilities in different situation related to forensic medicine and clinical toxicology.
- 1.4. **Percept** lifelong learning competencies necessary for continuous professional development; self-learning and basis of medical research in field of forensic medicine & clinical toxicology.
- 1.5. **Function** as leader of a team to provide patient care that is appropriate for dealing with health problems and health promotion.
- 1.6. **Create** solutions for health problems facing him/her during practicing forensic medicine & clinical toxicology.
- 1.7. **Accept** communication and interpersonal skills necessary for effective information exchange with patients and their families and with other health professions.
- 1.8. **Acquire** professionalism and attitudes in relation to colleagues, medical students and other health professions.
- 1.9. **Show** awareness of decision making capabilities in different situation related to forensic medicine and clinical toxicology.
- 1.10. **Use** recent technologies to improve his practice in forensic medicine and clinical toxicology.



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2-Intended Learning Outcomes (ILOS):

٢.أ - المعرفة والفهم :

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

- 2.a.1. **Highlight** the medicolegal aspects of different clinical forensic medicine disciplines including the various legal and medico-legal problems in civil and criminal cases.
- 2.a.2. **Illustrate** the different aspects of forensic pathology disciplines including postmortem examination “autopsy” of human body and interpretation of the results of autopsy to identify the cause and manner of death.
- 2.a.3. **Identify** principles and applications of forensic sciences; postmortem chemistry, and forensic radiology.
- 2.a.4. **Distinguish** different branches of toxicology, especially clinical toxicology (either general or systemic toxicology, acute or chronic), analytical toxicology and forensic toxicology.
- 2.a.5. **Describe the** anatomical, histological, physiological and pathological medical facts related to forensic medicine and clinical toxicology practice.
- 2.a.6. **Discuss** the medical malpractice issues, medical responsibility, different biomedical ethics and ethical dilemmas in the field of medicine & biomedical researches.
- 2.a.7. **Highlight** the different medical statistical methods necessary for proper research methodology in the field of his study.
- 2.a.8. **Discuss** the medical background of different organ failures, and



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toxicological causes of different medical health diseases, including (coma, shock, metabolic and electrolytes disturbances..... etc.).

2.a.9. Illustrate the impact of practicing forensic medicine and clinical toxicology on community and environment to improve the health outcomes.

2.a.10. Explain the principles and basic concepts of quality in professional practice including planning, improvement of performance and control of practicing outcomes.

٢. ب - القدرات الذهنية :

2.b. Intellectual Skills:-

By the end of the program the candidate should be able to:

2.b.1. Formulate diagnostic approaches necessary for proper diagnosis and management of intoxicated cases (either acute or chronic and drug dependence), and other related medical conditions.

2.b.2. Judge the risk hazards that could be met during autopsy, forensic examination of living persons and during management of intoxicated patients.

2.b.3. Assess different case scenarios of clinical and forensic toxicology, clinical forensic medicine, and forensic pathology as well as the different crime scene evidences investigations, to solve medicolegal problems and reach to the cause, mechanism, mode and manner of death.

2.b.4. Select the suitable analytical and investigational methods needed



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for toxicological diagnosis and identification of physical evidences either for screening purposes or for confirmatory methods in the living and dead cases.

2.b.5. Design a research protocol and choose a proper research methodology for thesis work in forensic medicine and clinical toxicology.

2.b.6. Correlate between forensic and toxicological conditions and its related physiological, pathological, histological and anatomical scientific basis to establish evidence based discussion.

2.b.7. Differentiate between various poisoning categories and interpret data to reach a proper diagnosis.

2.b.8. Decide indications for inpatient management of various conditions and differentiate those who can be managed safely as an outpatient.

2.b.9. Judge the different medical ethical dilemmas commonly met in field of medicine.

2.b.10. Criticize medicolegal reports based on medicolegal evidences, and crime scene investigation and be able to rewrite the reports.

2.b.11. Plan for improvement of professional performance in the field of forensic medicine and clinical toxicology.

2.c. Practical & Clinical Skills: ج. ٢ . مهارات مهنية وعملية :-

By the end of the program the candidate should be able to:

2.c.1. Manage different toxicological cases, either acute or chronic and that of drug dependence and their related medical conditions.

2.c.2. Write a detailed medicolegal report for the different medicolegal



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conditions.

2.c.3. Improve professional performance in the field of forensic medicine and clinical toxicology by using suitable technical methods during providing healthcare.

2.c.4. Perform medico-legal autopsies for different medicolegal deaths and medico-legal examination for cases of clinical forensic medicine.

2.c.5. Write detailed autopsy reports and other reports about identification of living, sex and ages from bones and by using X-rays films.

2.c.6. Perform a research design (thesis) in his medical specialty; either about a subject related to forensic medicine or clinical toxicology

2.c.7. Identify different anatomical and pathological specimen after their macroscopic and microscopic examination.

2.d. General and transferable skills: د.د. مهارات عامة :

By the end of the program the candidate should be able to:

2.d.1. Retrieve, manage, and manipulate information by all means, including electronic means, in a timely manner to effectively participate in medical seminars and conferences.

2.d.2. Use the sources of biomedical information and communication technology to remain current with advances in knowledge and skills of his specialty.

2.d.3. Establish life-long self-learning required for continuous professional development in his specialty.



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2.d.4. Work effectively as a member or leader of a health care team or other professional groups.

2.d.5. Communicate effectively with physicians, other health professionals, and health related agencies.

2.d.6. Demonstrate compassion, integrity, and respect for all patient's rights and treat all patients equally regardless to their believes, culture and behavior.

2.d.7. Manage time effectively and meeting organization including scientific seminars and conferences.

2.d.8. Conduct a good training for the young colleagues, and perform self-appraisal and evaluation.

3- Academic Standards

٣ - المعايير الأكاديمية للبرنامج:

- **Academic Standards of MD Program of forensic medicine and toxicology**, approved in department council date 5 / 9 / 2013, and in faculty council no. (35٤) date 16/٦/ 2013. (ملحق ١)

4- Reference standards

4- العلامات المرجعية:

a) المعايير القياسية العامة لبرامج الدراسات العليا (درجة الدكتوراة) (مارس ٢٠٠٩) (ملحق ٢)

b) **External references standards (Benchmarks):** المعايير المرجعية الخارجية: External reference points/benchmarks are selected to confirm the appropriateness of the objectives, ILOs of the program, (ملحق ٣).



توصيف برنامج الدكتوراة الطب الشرعى و السموم الأكلينيكية

1. Forensic medicine and toxicology program, Department of Forensic Medicine, University of Dundee, 2006. Dundee, Scotland. Tel: Int. code: +44 (1382) 388020; UK code (01382) 388020 www.dundee.ac.uk

: مصفوفة المعايير الأكاديمية للبرنامج مع المعايير القياسية 4 ملحق .
للدراسات العليا الصادرة عن الهيئة.

ملحق ٥: مصفوفة البرنامج مع المعايير الأكاديمية للبرنامج.

ملحق ٦: مصفوفة المقررات مع البرنامج Program-Courses ILOs Matrix

(5): Program structure and contents

5 - هيكل ومكونات البرنامج :

Program duration: 6 semesters

أ - مدة البرنامج :

a) Program duration: 6 semesters (3 years)

- 1st part: - One Semester (6 months).
- 2nd part: - Four Semesters (2 years).
- Thesis:

تسجل بعد اجتياز الجزء الأول ابتداء من الفصل الدراسي الثاني ولمدة لا تقل عن عامين (أربعة فصول دراسية) وتتم مناقشة الرسالة بعد ستة أشهر من تاريخ دور امتحان الجزء الثاني الذي اجتازه الطالب بنجاح.

Program structure

ب - هيكل البرنامج:

- Total hours of program : 65 credit hours.
- 1st part: - 10 credit
- 2nd part: - 40 credit
- Thesis: 15 credit

- Compulsory -----إلزامي all courses
- Selective -----انتقائي none
- Elective---اختياري none



توصيف برنامج الدكتوراة الطب الشرعى و السموم الأكلينيكية

ج- مستويات ومقررات البرنامج:
الزامى compulsory

الساعات المعتمدة ١٠ ساعات	الكود	المقررات	البند
٢ ساعة	FORE & TOXI 701	السموم الطبية الشرعية و السموم المهنية	الجزء الأول
١ ساعة	FORE & TOXI 702	الكيمياء الشرعية	
٢ ساعة	FORE & TOXI 703	المسؤولية الطبية وأخلاقيات المهنية	
٢ ساعة	FORE & TOXI 704	الباثولوجى	
٢ ساعة	FORE & TOXI 705	الأمراض الباطنية	
١ ساعة	FORE & TOXI 706	طرق البحث العلمى	
١٢ ساعات	FORE & TOXI 70٧	الطب الشرعى التشريعى(مقرر علمي وعملي)	
٨ ساعة	FORE & TOXI 70٨	الطب الشرعى الأكلينيكية (مقرر علمي وعملي)	
٨ ساعة	FORE & TOXI 70٩	علم السموم الاكلينيكية العامة (مقرر علمي وعملي)	
١٢ ساعة	FORE & TOXI 7١٠	علم السموم الأكلينيكية الخاصة (مقرر علمي وعملي)	
١٥ ساعة			رسالة دكتوراه
٦٥ ساعة			الإجمالي



توصيف برنامج الدكتوراة الطب الشرعى و السموم الأكلينيكية

First part (one semester):

a- Compulsory courses:

Course Title	Course Code	Credit	NO. of Teaching hours per week			Total teaching hours/ One Semester
			Theoretical	Practical / clinical	Total/ W	
السموم الطبية الشرعية و السموم المهنية	FORE & TOXI 701	2	1.5	1	2.5	37.5 hours
الكمياء الشرعية	FORE & TOXI 702	1	1		1	15 hours
المسؤولية الطبية وأخلاقيات المهنية	FORE & TOXI 703	2	2		2	30 hours
الباثولوجى	FORE & TOXI 704	2	1.5	1	2.5	37.5 hours
الأمراض الباطنية	FORE & TOXI 705	2	1.5	1	2.5	37.5 hours
طرق البحث العلمى	FORE & TOXI 706	1	1		1	15 hours

b- Elective courses: none

Second part (4 semesters):

a- Compulsory courses:

Course Title	Course Code	Credit hours	NO. of Teaching hours per week			Total teaching hours / Three Semesters
			Theoretical	Practical / Clinical	Total	
الطب الشرعى التشريعى	FORE & TOXI 70٧	12	9	6	15	900 hour
الطب الشرعى الأكلينيكية	FORE & TOXI 70٨	8	7	2	9	540 hours
علم السموم الاكلينيكية العامة	FORE & TOXI 70٩	8	6	4	10	600 hours
علم السموم الأكلينيكية الخاصة	FORE & TOXI 7١٠	12	9	6	15	900 hour



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b- Elective courses: none

c- Selective: none

٦ - محتويات المقررات (راجع توصيف المقررات)

مرفق توصيف المقررات طبقاً للنموذج

٧ - متطلبات الإلتحاق بالبرنامج : Program admission requirements

مادة (18) : يشترط في قيد الطالب لدرجة الدكتوراه:

- أ - أن يكون حاصلًا على درجة الماجستير في مادة التخصص أو إحدى المواد الأساسية المتصلة بها بتقدير جيد على الأقل من إحدى جامعات جمهورية مصر العربية أو على درجة معادلة لها من معهد علمي آخر معترف به ومعتمدة من المجلس الأعلى للجامعات.
- ب - موافقة جهة العمل.

ج - أن يتفرغ للدراسة لمدة سنة على الأقل في الجزء الثاني (فصلين دراسيين) وحسب متطلبات التدريب التي يقرها القسم المختص وموافقة مجلس الكلية.

د - تسديد الرسوم ومصاريف التدريب واستهلاك الأجهزة

مادة (١٩) : مواعيد القيد وبدا الدراسة :

يكون التقديم للقيد لدرجة الدكتوراه مرتين في السنة خلال شهرى مارس وأكتوبر من كل عام.

8 - القواعد المنظمة لإستكمال البرنامج :

ماده (٣٦)

يشترط في الطالب لنيل درجة الدكتوراه في الطب أو الجراحة أو العلوم الطبية الأساسية ما يلي :

١. حضور المقررات الدراسية والتدريبات الإكلينيكية والعملية والمعملية بصفة مرضية طبقاً للساعات المعتمدة على ألا يقل عن ٧٥%.
٢. أن يقوم ببحث في موضوع تقره الجامعة بعد موافقة مجلس الكلية والقسم لمدة سنتان على الأقل.
٣. أن يتقدم بنتائج البحث في رسالة تقبلها لجنة الحكم بعد مناقشة علنية للرسالة بعد نشر بحث مشتق من الرسالة في مجلة علمية معترف بها ولها موقع إلكتروني ومسجلة بقائمة مجلات النشر بالكلية.
٤. اجتياز الطالب للدورات الآتية من داخل جامعة بنها وذلك قبل مناقشة الرسالة:



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(المبادئ القانونية و الأخلاقية لممارسة المهنة - النشر الدولي للبحث العلمي - تسويق البحث العلمي)
٥. اجتياز اختبار التوفيل بمستوى لا يقل عن ٥٠٠ وحدة وذلك قبل مناقشة الرسالة من احد الجهات المعتمدة طبقا لمتطلبات الجامعة (يستثني من ذلك الطالب الحاصل على شهادة توفيل سابقة بمجموع ٥٠٠ وحدة وصلاحياتها مازالت سارية).

٦. أن يجتاز بنجاح الاختبارات التحريرية والإكلينيكية والشفهية المقررة وفقا لما هو مبين باللائحة.

٩ - Students Assessment Methods

٩ - طرق وقواعد تقييم الملحقين بالبرنامج

ما تقيسه من مخرجات التعلم المستهدفة	الطريقة	رقم
To assess knowledge and understanding & intellectual skills: From 2.a.1.....2.a.10. and 2. b.1.....2.b.11.	Written examination	1
To assess knowledge and understanding, intellectual skills & General & transferable skills 2.a.1.....2.a.10., 2.b.1.....2.b.11., 2.d.1.....2.d.8.	Oral examination	2
To assess knowledge and understanding, intellectual skills & practical and clinical skills and General & transferable skills: 2.a.1.....2.a.10., 2.b.1.....2.b.11., 2.d.1.....2.d.8 & 2.c.1.....2.c.7.	Practical (including performing autopsy) & clinical examination of intoxicated cases at BPCU	3
To assess knowledge and understanding, intellectual skills & practical and clinical skills and General & transferable skills: 2.a.1.....2.a.10., 2.b.1.....2.b.11., 2.d.1.....2.d. 8 & 2.c.1.....2.c.7.	Thesis Discussion	4



توصيف برنامج الدكتوراة الطب الشرعي و السموم الأكلينيكية

Final exam.



لائحة الدراسات العليا - كلية الطب البشري - جامعة بنها



(٩) درجة الدكتوراة في الطب الشرعي و السموم الإكلينيكية (FORE & TOXI 700)

M.D. in Forensic Medicine & Toxicology (FORE&TOXI 700)

ملاحظات	الإمتحانات							المناهج			
	مجموع الدرجات	إكلينيكي الدرجة	شغوي الدرجة	عملي الدرجة	التحريري			الساعات المعتمدة	الكود	المقررات الدراسية	
					الدرجة	زمن الامتحان	عدد الأوراق				
التدريس والإمتحان تحت مسؤولية القسم يضاف الى درجات الجزء الثاني ١٥٠ درجة للصفة التشريحية و ٥٠ درجة للاصابات	١٠٠	-	20	30	٥٠	٢ ساعة	1	2	FORE & TOXI 701	مقرر علمي في السموم الطبية الشرعية و السموم المهنية	الجزء الأول
	50	-	20	-	30	٢ ساعة	1	1	FORE & TOXI 702	مقرر علمي في الكيمياء الشرعية	
	100	-	50	-	50	٢ ساعة	1	2	FORE & TOXI 703	مقرر علمي المسؤولية الطبية و أخلاقيات المهنة	
	١٠٠	-	20	30	٥٠	٢ ساعة	1	٢	FORE & TOXI 704	مقرر علمي في البتولوجيا (فيما يختص بالطب الشرعي)	
	١٠٠	20	30	-	٥٠	٢ ساعة	1	٢	FORE & TOXI 705	مقرر علمي في الأمراض الباطنية (فيما يختص بالسموم الإكلينيكية)	
	٥٠	-	20	-	30	٢ ساعة	1	١	FORE & TOXI 706	مقرر علمي في طرق البحث العلمي.	
	٦٠٠	75	150	75	٣٠٠	٣ ساعة	١	١٢	FORE & TOXI 707	مقرر علمي في الطب الشرعي التشريحي	
٤٠٠		١٥٠	٥٠	٢٠٠	٢ ساعة	١	٨	FORE & TOXI 708	مقرر علمي في الطب الشرعي الإكلينيكي		
٤٠٠	50	100	٥٠	٢٠٠	٢ ساعة	١	٨	FORE & TOXI 709	مقرر علمي في السموم الإكلينيكية العامة		
٦٠٠	50	150	100	٣٠٠	٣ ساعة	١	١٢	FORE & TOXI 710	مقرر علمي في السموم الإكلينيكية الخاصة		
								١٥			الرسالة
	٢٥٠٠	195	710	335	1260			٦٥			المجموع



توصيف برنامج الدكتوراة الطب الشرعى و السموم الأكلينيكية

Evaluation of Program:

١٠ - طرق تقويم البرنامج:

Evaluator	Tools	Sample evidence
Internal evaluator (s) مقيم داخلى	<ul style="list-style-type: none">Focus group discussionMeetings	<u>Reports</u>
External Evaluator (s) مقيم خارجى	<ul style="list-style-type: none">Reviewing according to external evaluatorChecklist report .	<u>Reports</u>
Senior student (s) طلاب السنة النهائية	مقابلات , استبيان	جميع الطلبة
Alumni الخريجون	مقابلات , استبيان	لا تقل عن ٥٠% من طلبة آخر ٣ دفعات
Stakeholder (s) أصحاب العمل	مقابلات , استبيان	لجنة ممثلة لجميع جماعات العمل
Others طرق أخرى	None	

١١ : استراتيجيات التعليم و التعلم علي مستوي البرنامج:

١. استراتيجية التعلم النشط. Active learning
٢. استراتيجية التعليم المبني على النتائج. Outcome-based learning
٣. ايتراتيجية التعليم عن بعد باستخدام الوسائل التكنولوجية الحديثة E-Learning

منسق البرنامج : التوقيع

Prof. Ola Gaber Haggag,
Prof. (A) Abdelmonem G. Madboly

رئيس مجلس القسم



توصيف برنامج الدكتوراة الطب الشرعى و السموم الأكلينيكية

(أ.د / شيرين الخولى)

توصيف المقررات التابعة للبرنامج

Program courses

First part:
السموم الطبية الشرعية و السموم المهنية
الكيمياء الشرعية
المسؤولية الطبية وأخلاقيات المهنية
الباثولوجى
الأمراض الباطنية
طرق البحث العلمى
Second part:
الطب الشرعى التشريعى
الطب الشرعى الأكلينيكية
السموم الاكلينيكية العامة
السموم الأكلينيكية الخاصة



توصيف برنامج الدكتوراة الطب الشرعى و السموم الأكلينيكية

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ملحق ١: Academic standard of the program:

جامعة بنها
كلية الطب
قسم الطب الشرعي و السموم الأكلينيكية

Academic Reference Standards (ARS) for MD Degree in Forensic Medicine and Toxicology

1. Attributes of gratitude:

- 1.1. Demonstrate competency and mastery of basics, methods and tools of scientific research and clinical audit in forensic medicine and clinical toxicology.
- 1.2. Have continuous ability to add knowledge new developments to forensic medicine and clinical toxicology through research and publication
- 1.3. Appraise and utilize scientific knowledge to continuously update and improve forensic medicine & clinical toxicology practice and relevant basic sciences.
- 1.4. Acquire excellent level of medical knowledge in the basic biomedical, clinical, behavioral and clinical sciences, medical ethics and apply such knowledge in patient care in forensic medicine and clinical toxicology.
- 1.5. Demonstrate in depth awareness of public health and health policy issues and share in system-based improvement of health care.
- 1.6. Identify and create solutions for health problems in forensic medicine and clinical toxicology.



- 1.7. Acquire an in depth understanding of common areas of forensic medicine and clinical toxicology from basic clinical care to evidence based clinical application, and possession of skills to manage independently all problems in these areas.
- 1.8. Function effectively to provide patient care that is appropriate, compassionate for dealing with health problems and health promotion.
- 1.9. Use recent technologies to improve his practice in forensic medicine and clinical toxicology.
- 1.10. Demonstrate leadership competencies including interpersonal and communication skills that ensure effective information exchange with individual patients and their families and teamwork with other health professions, the scientific community and the public.
- 1.11. Master decision making capabilities in different situation related to forensic medicine and clinical toxicology.
- 1.12. Employ the available medical data effectively obtained during diagnosis of different forensic and toxicological conditions, develop them and find new medical resources.
- 1.13. Demonstrate awareness of his role in community development and environmental preservation.



1.14. Show model attitudes and professionalism.

1.15. Function as teacher in relation to colleagues, medical students and other health professions with concomitant lifelong learning and maintenance of competence and ability for continuous medical education in forensic medicine and clinical toxicology.

2. Academic Standards:

2.1. Knowledge and understanding:

By the end of MD program, candidate should be able to recognize and understand the followings:

- 2.1.1. Recent advances, areas under research as well as the basic principles and theories in the field of forensic science, clinical toxicology and analytical toxicology.
- 2.1.2. Scientific research ethics, research methodology & research design; basic including principles of research, how research is conducted, evaluated, explained to patients, and applied to patient care.
- 2.1.3. Legal and medicolegal aspects in practice of clinical toxicology and forensic medicine as well as the medical ethics and responsibility.
- 2.1.4. Principles and basic concepts of quality in professional practice including planning, improvement of performance and control of practicing outcomes.
- 2.1.5. Knowledge related to environmental development, patient safety, safe occupational practice, serving communities and research results in improving public health outcomes.

2.2. Intellectual skills:

By the end of MD program, candidate should be able to recognize and mastering the following skills:

- 2.2.1. Medical data analysis, interpretation, evaluation and proper therapy choice.
- 2.2.2. Medical problem solving and Evidence-based medicine according to the available medical data.2.2.9
- 2.2.3. Participation in research development and innovation.
- 2.2.4. Scientific paper reviewing and editing.



- 2.2.5. Risk assessment in medical practice.
- 2.2.6. Planning for improvement of professional performance in the field of forensic medicine and clinical toxicology.
- 2.2.7. Decision making skills in different professional situations.
- 2.2.8. Development, innovation and medical breakthrough.
- 2.2.9. Evidence based discussion.

2.3. Practical/Professional skills:

By the end of MD program, candidate should accept & apply the following skills:

- 2.3.1. Professionalism and up to date medical practice in the field of forensic medicine and clinical toxicology.
- 2.3.2. Medical and medicolegal reports writing and evaluation.
- 2.3.3. Ability to investigate and evaluate their diagnostic and investigational tools, to continuously improve patient care based.
- 2.3.4. Effective use of Internet Technology and healthcare information system in medical practice and patient medical records to optimize learning; and participate in the education of patients, families, students, residents and other health professionals.
- 2.3.5. Planning for improvement of professional performance in the field of forensic medicine and clinical toxicology practice.

2.4. General and transferable skills:

By the end of MD program, candidate should be able to:

- 2.4.1. Effective Interpersonal and communication skills that result in the exchange of information and collaboration with patients, their families, and health professionals.
- 2.4.2. Use of Internet Technology and healthcare information system in medical practice.
- 2.4.3. Teaching and evaluation skills of the others as senior staff.
- 2.4.4. Self-appraisal and needs evaluation.
- 2.4.5. Accessibility to specialty-specific and other appropriate reference materials in print or in electronic format.
- 2.4.6. Teamwork/leadership.
- 2.4.7. Time management and meeting organization.

اعتماد مجلس القسم رقم () ، بتاريخ / /



ملحق ٢: المعايير القياسية العامة لبرامج قطاع الدراسات العليا

برامج الدكتوراة

١- مواصفات الخريج :

خريج برنامج الدكتوراة فى اى تخصص يجب ان يكون قادرا على
١-١ اتقان اساسيات ومنهجيات البحث العلمى

- ٢-١ العمل المستمر على الاضافة للمعارف فى مجال التخصص
- ٣-١ تطبيق المنهج التحليلى والناقد للمعارف فى مجال التخصص والمجالات ذات العلاقة
- ٤-١ دمج المعارف المتخصصة مع المعارف ذات العلاقة مستنبطاً ومطوراً للعلاقات البنائية بينها
- ٥-١ اظهار وعيا عميقا بالمشاكل الجارية والنظريات الحديثة فى مجال التخصص

- ٦-١ تحديد المشكلات المهنية وايجاد حلولاً مبتكرة لحلها
- ٧-١ اتقان نطاقاً واسعاً من المهارات المهنية فى مجال التخصص
- ٨-١ التوجه نحو تطوير طرق وادوات واساليب جديدة للمزاولة المهنية
- ٩-١ استخدام الوسائل التكنولوجية المناسبة بما يخدم ممارسة المهنة
- ١٠-١ التواصل بفاعلية وقيادة فريق عمل فى سياقات مهنية مختلفة
- ١١-١ اتخاذ القرار فى ضل المعلومات المتاحة
- ١٢-١ توظيف الموارد المتاحة بكفاءة وتنميتها والعمل على ايجاد موارد جديدة
- ١٣-١ الوعى بدوره فى تنمية المجتمع والحفاظ على البيئة
- ١٤-١ التصرف بما يعكس الالتزام بالنزاهة والمصداقية وقواعد المهنة
- ١٥-١ الالتزام بالتنمية الذاتية المستمرة ونقل علمه وخبراته للآخرين

٢- المعايير القياسية

- ١-٢ المعرفة والفهم
- بانتهاج دراسة برنامج الدكتوراه يجب ان يكون الخريج قادراً على الفهم والدراسة بكل من
- ١-٢-١ النظريات والاساسيات والحديث من المعارف فى مجال التخصص والمجالات ذات العلاقة
- ٢-١-٢ اساسيات ومنهجيات واخلاقيات البحث العلمى وادواته المختلفة
- ٣-١-٢ المبادئ الاخلاقية والقانونية للممارسة المهنية فى مجال التخصص
- ٤-١-٢ مبادئ واساسيات الجودة فى الممارسة فى مجال التخصص
- ٥-١-٢ المعارف المتعلقة بأثار ممارسته المهنية على البيئة وطرق تنمية البيئة وصيانتها

٢-٢ المهارات الذهنية

- بانتهاج دراسة برنامج الدكتوراه يجب ان يكون الخريج قادراً على
- ١-٢-٢ تحليل وتقييم المعلومات فى مجال التخصص والقياس عليها والاستنباط منها
- ٢-٢-٢ حل المشاكل المتخصصة استناداً على المعطيات المتاحة
- ٣-٢-٢ اجراء دراسات بحثية تضيف الى المعارف
- ٤-٢-٢ صياغة أوراق علمية

- ٥-٢-٢ تقييم المخاطر في الممارسات المهنية
- ٦-٢-٢ التخطيط لتطوير الاداء في مجال التخصص
- ٧-٢-٢ اتخاذ القرارات المهنية في سياقات مهنية مختلفة
- ٨-٢-٢ الابتكار/الابداع
- ٩-٢-٢ الحوار والنقاش المبني على البراهين والادلة

٣-٢ المهارات المهنية

- بانتهاء دراسة برنامج الدكتوراه يجب ان يكون الخريج قادرا على
- ١-٣-٢ اتقان المهارات المهنية الاساسية والحديثة في مجال التخصص
- ٢-٣-٢ كتابة وتقييم التقارير المهنية
- ٣-٣-٢ تقييم وتطوير الطرق والادوات القائمة في مجال التخصص
- ٤-٣-٢ استخدام الوسائل التكنولوجية بما يخدم الممارسة المهنية
- ٥-٣-٢ التخطيط لتطوير الممارسة المهنية وتنمية اداء الاخرين

٤-٢ المهارات العامة والمنتقلة

- بانتهاء دراسة برنامج الدكتوراه يجب أن يكون الخريج قادرا على
- ١-٤-٢ التواصل الفعال بأنواعه المختلفة
- ٢-٤-٢ استخدام تكنولوجيا المعلومات بما يخدم تطوير الممارسة المهنية
- ٣-٤-٢ تعليم الاخرين وتقييم ادائهم
- ٤-٤-٢ التقييم الذاتي والتعليم المستمر
- ٥-٤-٢ استخدام المصادر المختلفة للحصول على المعلومات والمعارف
- ٦-٤-٢ العمل في فريق وقيادة فرق العمل
- ٧-٤-٢ ادارة اللقاءات العلمية والقدرة على ادارة الوقت

ملحق 3: Benchmarks (المعايير المرجعية الخارجية)

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Forensic Medicine programme Guide

What the course is

The Master of Forensic Medicine is a 1-year taught masters course designed primarily for overseas medical graduates. It may be suitable also for dental graduates, and for



graduates in nursing or the biological sciences who have already completed a postgraduate degree such as an MSc or a PhD. The philosophy of the programme is to foster the development of medico-legal expertise founded in current scientific knowledge and devoid of bias. The course addresses those aspects of forensic medicine and science which are most frequently the subject of expert testimony in the courts. The intention is to provide postgraduate students with core knowledge and intellectual skills in forensic medicine.

The course may be taken full-time over 12 months or part-time over 24 months. The course begins in mid-September, at the start of the university academic year. (The precise dates of the university academic year can be found on the university website). Students should plan on attending at the university during Freshers' Week, which is the week immediately before the

start of the first semester. The course follows the usual university semester dates with a Christmas vacation of four weeks and an Easter vacation of three weeks.

Teaching is through lectures, small group seminars in which the students are required to make Powerpoint presentations, and one-to-one case-based teaching on medico-legal autopsy cases.

All of the teaching materials, including the course and module guides, the lecture schedules, the lecture notes and assignments are provided on a computer-based system (Blackboard). Each student has personal desk space with computer, printer and internet access at all hours, seven days a week. There is also access to the Centre library at all hours, seven days a week.

COURSE AIMS AND OBJECTIVES

This one-year taught Masters course stands alone with no prerequisite course requirements other than a basic degree in medicine that is MB, ChB, or an equivalent qualification. The philosophy of the programme is to foster the development of medico-legal expertise founded in current scientific knowledge and devoid of bias. The course addresses those aspects of forensic medicine and science which are most frequently the subject of expert testimony in the courts.

The intention is to provide postgraduate students with core knowledge and intellectual skills in forensic medicine.

After completing this course the successful candidate will:

1. Have a knowledge and understanding of forensic medicine principles, concepts and terminology
2. Have an understanding of related applications of forensic science
3. Be able to apply their knowledge and skills to accurately observe and document medicolegal findings
4. Be able to develop and critique medico-legal opinions based upon current literature

SYLLABUS

The MFM course comprises three modules. There are two compulsory taught modules, the one in forensic medicine and the other in forensic science. The third module which makes up the course may be either a literature review dissertation or alternatively a research dissertation based upon a small research project.



The overall aim of the **forensic medicine module** is to provide an integrated working knowledge of the main subject areas within forensic medicine. The more detailed learning outcomes of the module and the listing of lecture topics are set out in an appendix to this document (Appendix 1). The forensic medicine module is delivered through lectures, some of which are discussion-based requiring student participation. The lecture material is illustrated with case examples. Each lecture is of two hours and there are 15 lectures in all. In addition there is case-based one-to-one teaching in the mortuary involving external examination of deceased and post mortem dissections. Students are required to complete records of learning on a minimum 50 external examinations and 50 post mortem dissections. The one-page record of learning sheets follow a similar format to those used by the Royal College of Pathologists for the training of forensic pathologists in the UK. Students are required to submit photocopies of these sheets as part of the course requirements. In addition there are four written essay type assessments which require the development of medico-legal opinions in fictionalised cases. There is available on Blackboard a detailed module guide for the forensic medicine taught module together with the lecture schedule, lecture notes, teaching notes on the medico-legal autopsy, the record of learning sheets, the four assignments and examples of medico-legal opinions. Students will find clear information regarding the scheduling of all assessments, including submission dates for coursework within the module guide.

Feedback is provided to students on all assessed work and is scheduled into the lecture series (see Appendix). Students may request additional individual feedback from the module lecturer at any time by contacting the lecturer via email through Blackboard.

The overall aim of the **forensic science module** is to develop an understanding of applications

of forensic science related to the practice of forensic medicine. The more detailed learning outcomes of the module and the listing of seminar topics are set out in an appendix to this

document (Appendix 2). The forensic science module is delivered through small group seminars

in which students are required to make Powerpoint presentations on allocated topics detailed in

the module guide. These presentations form the basis of class discussions. Presentations are assessed in relation to content, focus and style. Seminar presentations and student participation

in the seminars count for 50% of the final mark for the forensic science module. Each seminar is of two hours and there are 10 seminars in all. Teaching is enhanced using computer-based fictional case scenarios and internet-linked material for individual study.

There is available on

Blackboard a detailed module guide for the forensic science taught module together with the

seminar schedule, a listing of relevant references, student seminar tasks, example Powerpoint

presentations and advice on how to prepare such a presentation, fictional case scenarios and

internet links to sites with relevant teaching material. Assessment is by course work with



seminar presentations and participation in the seminar counting for 50% of the final mark. There are two written essay type assignments each counting for a further 25% of the module final mark. Students will find clear information regarding the scheduling of all assessments, including submission dates for coursework within the module guide. Feedback is provided to students on all assessed work and is scheduled into the seminar series (see Appendix). Students may request additional individual feedback from the module lecturer at any time by contacting the lecturer via email through Blackboard.

The third module is either a literature review dissertation or a research dissertation based

upon a short research project. The majority of students undertake a literature review dissertation. The literature review module intends to provide the student with the ability to retrieve, critically review published literature and produce an accurate and balanced synthesis.

The subject matter of the review dissertation is agreed between the course organiser and the individual student within 4 weeks of the start of the MFM programme. The selection of the subject matter takes into account current issues in forensic medicine, the interests of the student, and any particular medico-legal issues specific to the area of the world in which the student intends to practice. A first draft of a significant part of the review dissertation must be submitted in the first week of classes following the New Year holiday break. The alternative option, the research dissertation, aims to provide the necessary skills to plan, execute and write-up a research project. There is one-to-one teaching on the project and developing a literature review around the subject matter of the project. There are limited opportunities to undertake research projects and students who wish to do so should raise the matter no later than the first few weeks of the course, and preferably prior to entering the course. Feedback on literature review and research projects is provided orally to students on an individual basis within 2 weeks of submission of any written work. Students may request additional individual feedback from the module lecturer at any time by contacting the lecturer via email through Blackboard

LEARNING OUTCOMES

By the end of the course, students should:

1. A detailed and critical knowledge and understanding of the science and art of forensic medicine
2. A critical awareness of current issues in forensic medicine
3. A critical understanding of the application of forensic science
4. The ability to interpret forensic medical evidence with objectivity and balance



5. The ability to retrieve, critically review published literature and produce an accurate and balanced synthesis
6. The ability to communicate with peers and more senior specialists orally and in writing
7. The ability to use a wide range of software to support and enhance the above
8. The ability to take responsibility for their own work and to exercise substantial autonomy and initiative in a learning environment

RECOMMENDED TEXTS

The prescribed course texts are listed in the forensic medicine and forensic science module

guides. Students are advised that a sufficient number of these texts are available in the Centre

library for the use of students. These texts may not be removed from the library and are available at all hours, seven days a week. Consequently students may choose not to purchase

their own copies of these texts, some of which are expensive.

ATTENDANCE & PARTICIPATION

Attendance at every tutorial meeting and seminar (subject to illness or other good cause) is required if a student is to meet the standards of attendance and participation. If a student fails to

attend tutorials or seminars, absence will be noted on the student record and so be a consideration at any stage where decisions about progress and future are being made and when references are being prepared. A student may be required to do additional work to compensate

for absence (whatever the reason for the absence) and to demonstrate that there has been coverage of the materials and skills which that tutorial or seminar was designed to address. Such work must be completed. If a student has good reason for missing a class, eg illness, the student

can self-certify absence for up to 5 days and should also inform the module organiser so that this

can be noted. If an illness results in absence for more than 5 days, students must go to their doctor for confirmation of the illness and obtain a medical certificate signed by the GP. Medical certificates should be sent to the Centre office who will inform others as appropriate. Please note, however, that self-certification of illness is not permitted in relation to late submission of assessments.

ASSESSMENT

The individual coursework assignments provide formative assessment but also contribute towards a summative statement of achievement. Formative assessment is designed to provide students with feedback on progress and inform development. Summative assessment provides a measure of achievement or failure made in respect of a student's performance in relation to the intended learning outcomes of the programme. The intended learning outcomes for the course as a whole are set out above and for the individual modules are set out as appendices to this document (see Appendices 1-3). Information on the types and number of assignments is given in



the section on the syllabus above, and an overall outline of the timetable of work and assessments is given in an appendix to this document (Appendix 5). Students will find clear information regarding the scheduling of all assessments, including submission dates for coursework within the individual module guides. This information is provided at the start of the programme to enable students to plan and prepare effectively. Feedback is provided to students on all assessed work and is scheduled into the lecture and seminar series in forensic medicine and forensic science. Feedback on literature review and research projects is provided orally to students on an individual basis within 2 weeks of submission of any written work. This feedback is intended to promote learning and facilitate improvement. Students may request additional individual feedback from any of the module lecturers at any time by contacting them via email through Blackboard.

Assessment details are given in the individual module guides and have been outlined above. If, for whatever reason, you do not complete the assignment(s) for a module you will be deemed to have a nil mark for that element of the module though the circumstances of your non-completion will be considered by the board of examiners.

APPENDIX 1: FORENSIC MEDICINE MODULE

Intended learning outcomes

Knowledge and Understanding:

- A detailed and critical knowledge and understanding of the science and art of forensic medicine
- A critical awareness of current issues in forensic medicine

Skills:

- The ability to apply their knowledge to accurately observe and document medico-legal findings
- The ability to interpret forensic medical evidence with objectivity and balance
- The ability to communicate with peers and more senior specialists orally and in writing
- The ability to concisely and cogently critique medico-legal opinions based upon current medical literature

Lecture topics:

1. Introduction, Wounds 1
2. Wounds 2
3. Post Mortem Changes and Time of Death
4. Gunshot Wounds
5. Alcohol and Drugs



6. Assignment 1 Discussion
7. Death and Related Matters: Certification, Disposal & Organ Transplantation
8. Death Investigation
9. Assignment 2 Discussion
10. Bodies recovered from Fire and Water
11. Asphyxia
12. Personality Profiling of Assailants
13. Sexual Offences and Child Abuse
14. Assignment 3 Discussion
15. Assignment 4 Discussion

APPENDIX 2: FORENSIC SCIENCE MODULE

Intended learning outcomes

Knowledge and Understanding:

- Have an understanding of the principles and practice of physical evidence collection and preservation
- Have a critical understanding of the principles underpinning the various class and individualising tests performed by the laboratory, for each type of physical evidence

Skills:

- The ability to retrieve, critically review published literature and produce an accurate and balanced synthesis
- The ability to communicate with peers and more senior specialists orally and in writing
- The ability to use a wide range of software to support and enhance the above
- The ability to take responsibility for own work and to exercise substantial autonomy and initiative in a learning environment

Seminar topics:

1. Laboratory Instruments and Techniques in Forensic Science
2. Physical Match and Fingerprints
3. Fingerprints
4. Fibres & Hairs
5. Blood spatter, Serology & DNA
6. Drugs and Document Examination
7. Firearms
8. Paint and Road Traffic Accidents
9. Statistical Analysis

APPENDIX 3: LITERATURE REVIEW DISSERTATION OR RESEARCH DISSERTATION

(a) Literature review dissertation

Intended learning outcomes

Knowledge and Understanding:



- critical awareness of current issues in forensic medicine

Skills:

- The ability to retrieve, critically review published literature and produce an accurate and balanced synthesis
-
- The ability to communicate with peers and more senior specialists orally and in writing
- The ability to use a wide range of software to support and enhance the above
- The ability to take responsibility for own work and to exercise substantial autonomy and initiative in a learning environment

(b) Research dissertation

Intended learning outcomes

By the end of the module, students should have:

- Knowledge of safety procedures as they apply within a scientific laboratory
- An attitude which values honesty, frankness, and integrity in scientific research.
- The ability to plan and execute a significant project of research or investigation
- The ability to retrieve, critically review published literature and produce an accurate and balanced synthesis
- The ability to take responsibility for own work and to exercise substantial autonomy and initiative in a project

APPENDIX 4: UNIVERSITY OF DUNDEE SENATUS ACADEMICUS REGULATIONS GOVERNING PLAGIARISM AND ACADEMIC DISHONESTY
{Note: these Regulations apply to all undergraduate and postgraduate degrees, diplomas and certificates}

1. The University's degrees and other academic awards are granted in recognition of a candidate's personal achievement.
2. Any action on the part of a candidate which involves plagiarism (defined as the unacknowledged use of another's work as if it were one's own exemplified by copying from a source without acknowledgement of its origin) or other form of academic dishonesty, in work which may be assessed as part of the requirements for an academic award, will be regarded as a serious offence.
3. Where a substantive case of academic dishonesty or plagiarism is detected by an examiner, a written or oral report shall be made to the Board of Examiners(1) concerned, along with one of the following recommendations:
 1. that the examiner is satisfied that the matter should be noted but requires no further action by the Board(1) because it involves no more than a single lapse or a very few minor lapses which have been taken into account in the examiner's



assessment of the work; or

2. that the nature of the academic dishonesty is such that in the examiner's opinion it is appropriate to reduce the candidate's mark by a specified amount to reflect the examiner's assessment of the extent of the cheating; or

3. that the nature of the academic dishonesty, and/or its extent, is so significant that the examiner is unable to penalise the work adequately by a reduction in marks and that the Board of Examiners(1) should consider it as a serious case of cheating.

· 4(1) In the case of a recommendation from an examiner in terms of Regulation 3(2) the Board of Examiners(1) has the discretion to adjust the marks and results up to the point where the academic rating for the piece of work in question is reduced to zero with whatever consequences would normally follow from such performance, including loss of class in the case of honours examinations, or failure in the case of other examinations.

· 4(2) A Board of Examiners(1) has no power to make a greater adjustment to marks by way of penalty for what it regards as a more serious and substantial case of academic dishonesty. Where a Board of Examiners(1) believes the extent of the dishonesty in terms of Regulation 3(3) to be such that sanction over and above the disallowance of work is appropriate, as detailed a report as possible of the circumstances of the offence should be sent to the Academic Secretary who will arrange for it to be considered along with his recommendation concerning the subsequent action which might be taken by the University Committee on Academic Dishonesty. In such a case, any decision by the Board of Examiners(1) concerning that particular student shall be suspended pending the decision of the Committee.

· 4(3) The decision of the Committee on Academic Dishonesty shall be final except in those cases where the Committee believes refusal to award a degree or other qualification or exclusion from the University is appropriate. In such cases the Committee shall make a recommendation to the Senate.

November 2000

Footnotes

(1) or the Director of the Centre in cases where academic dishonesty or plagiarism is detected in

coursework undertaken during the academic year. This is to ensure that matters may be dealt

with expeditiously in the interests of the students concerned rather than having to wait for the

annual meeting of the Board of Examiners in June.

(2) Any such decision of the Senatus is subject to the provision of Statute 9(5)(b).





Monash University Handbook 2011 Postgraduate Forensic medicine

Managing faculty [Faculty of Medicine, Nursing and Health Sciences](#)

Description

Forensic medicine aims to develop academic standards in clinical forensic medical practice and to produce graduates who have a sound knowledge of medico-legal principles. Students have the opportunity to develop practical skills in research as well as in providing clinical forensic services to the community.

Units

For the schedule of units required to complete a given course in this area of study, refer to the Handbook entry for the relevant course.

Relevant Courses

[3884](#) Graduate Certificate of Nursing (Forensic)

[3412](#) Master of Forensic Medicine

3884 - Graduate Certificate of Nursing (Forensic)

This course entry should be read in conjunction with information provided in the 'Faculty information' section of this Handbook by the Faculty of Medicine, Nursing and Health Sciences

Managing faculty [Medicine, Nursing and Health Sciences](#)

Abbreviated title GradCertNurs(Forens)

Total credit points
required 24

Standard duration

of study (years) 1 year PT

Study mode and

location Off-campus ([Clayton](#))

Admission, fee and

application details <http://www.monash.edu/study/coursefinder/course/3884>

Contact details

Ms Debbie Hellings, course administrator: telephone +61 3 9684 4115;

email debbie.hellings@monash.edu or debbieh@vifm.org

Visit website <http://www.vifm.org>

Course

coordinator [Dr Angela Williams](#)

Notes

- This course is not available to international student visa holders.
- Part-time study only.



Description

This course, offered by the Department of Forensic Medicine, aims to assist those with an interest in pursuing professional development in the area of forensic nursing. Areas covered are:

- forensic knowledge and nursing responsibilities in forensic cases
- clinical consultations with victims of crime and offenders
- medico-legal report writing and provision of evidence in court
- theoretical and cultural aspects of interpersonal violence.

Objectives

On completion of the course, graduates will have gained the knowledge, skills and attributes

(theoretical and practical) necessary to:

- provide a comprehensive nursing service for victims of interpersonal violence
- demonstrate a thorough working knowledge of the forensic and nursing responsibilities in forensic cases
- obtain highly developed communication skills in clinical consultations with victims of crime and offenders
- write medico-legal reports and provide evidence in courts on a range of clinical situations and consultations
- liaise effectively with associated agencies, law enforcement, criminal justice system and counselling services on issues surrounding individual cases
- comprehend theoretical and cultural aspects of interpersonal violence.

Assessment

Assessment includes case study reports, presentations, online discussion, clinical placement/attachment.

Structure

This course comprises four core units.

Requirements

Semester 1

- [FOR5001](#) Sexual assault nursing I
- [FOR5003](#) Understanding injuries

Semester 2

- [FOR5002](#) Sexual assault nursing II
- [FOR5004](#) Nursing and the criminal justice system

Award(s)



Graduate Certificate of Nursing (Forensic)

FOR5001 - Sexual assault nursing I

6 points, SCA Band 0 (NATIONAL PRIORITY), 0.125 EFTSL

Refer to the specific [census and withdrawal dates](#) for the semester(s) in which this unit is offered.

Level Postgraduate

Faculty [Faculty of Medicine, Nursing and Health Sciences](#)

Offered [Clayton](#) First semester 2011 ([Off-campus](#))

Coordinator(s) [Dr Angela Williams](#)

Synopsis

Divided into key themes surrounding the theory and historical perspective of rape and sexual

assault, the incidence and prevalence of sexual offences, history taking, examination findings,

and understanding the complexities of victims of sexual assault, this unit provides the foundations to understanding adult sexual assault nursing and forms the basis for

[FOR5002](#). Both

units give the sexual assault nurse a broad understanding of managing adult sexual assault in

their community. Exploring best practice models from national and international resources the

student learns to critically evaluate these and other journal articles provided.

Objectives

Upon completion of this unit the student will be able to:

a. Describe the incidence and prevalence of violence against women and sexual assault as it

relates to the community;

b. Define the elements of sexual assault and the law surrounding sexual offences;

c. Describe both female and male genital anatomy;

d. Develop a clear understanding of genital physiology; e) Evaluate sexual assault services,

existing models and journal reviews;

e. Develop skills in communicating with victims of sexual assault whilst understanding the

complexities of history taking in these circumstances;

f. Define the process used to perform a high quality sexual assault examination;

g. Understand the importance of clear and precise record keeping, documentation and the advantages and disadvantages photography as an adjunct to written records and

i. Identify and understand the needs of vulnerable subgroups or of victims from diverse and/or ethnic communities.

Assessment

Workbook Activities (20%)

Online Discussion (10%)

Case Presentation (20%)



Residential Participation (10%)

Case Study (40%)

Chief examiner(s)

[Dr Jo Ann Parkin](#)

Off-campus attendance requirements

Compulsory 3 day workshop each semeste

FOR5003 - Understanding injuries

6 points, SCA Band 0 (NATIONAL PRIORITY), 0.125 EFTSL

Refer to the specific [census and withdrawal dates](#) for the semester(s) in which this unit is offered.

Level Postgraduate

Faculty [Faculty of Medicine, Nursing and Health Sciences](#)

Offered [Clayton](#) First semester 2011 ([Off-campus](#))

Coordinator(s) [Dr Angela Williams](#)

Synopsis

The unit is divided into key themes surrounding pathophysiology, causation, classification, and documentation of injuries. Designed to give participants advanced skills in assessing injuries with specific regard to these themes and common injury patterns enabling them to interpret injuries and provide opinions as to their likely cause to the criminal justice system. The unit explores best practice models from national and international resources and requires the student to critically evaluate these and other journal articles provided. A national and international focus is maintained throughout as the student gains skills adaptable to professional opportunities interstate and overseas.

Objectives

Upon completion of this unit the student will be able to:

- Demonstrate an understanding of the pathophysiology of injuries;
- Describe the limitations of accurate interpretation of injuries or the absence of injuries;
- Use forensic photography as an adjunctive method of documentation;
- Detail the classification of injuries;
- Critically examine the current literature surrounding injuries and injury patterns;
- Analyse and interpret mechanism and circumstances by which the injuries were sustained;

Assessment

Workbook Activities (30%)

Case Studies (30%)

Case Presentation and Residential Participation (10%)

Assignment (30%)



Chief examiner(s)

Dr Angela Williams

Off-campus attendance requirements

Compulsory 3 day workshop each semester.

FOR5002 - Sexual assault nursing II

6 points, SCA Band 0 (NATIONAL PRIORITY), 0.125 EFTSL

Refer to the specific [census and withdrawal dates](#) for the semester(s) in which this unit is offered.

Level Postgraduate

Faculty [Faculty of Medicine, Nursing and Health Sciences](#)

Offered [Clayton](#) Second semester 2011 (Off-campus)

Coordinator(s) [Dr Angela Williams](#)

Synopsis

It is intended that this unit will provide the foundations to understanding adult sexual assault

nursing alongside the unit [FOR5001](#). Together these units will give the sexual assault nurse a

broad understanding of managing adult sexual assault in their community. The unit is divided

into key themes surrounding examination findings, specimen collection, therapeutics medico

legal issues, interagency liaison and developing a sexual assault service. Group and studentstudent

facilitated learning is encouraged as students engage each other, exchange opinions and offer/receive peer review. The unit explores best practice models from national and international

resources and requires the student to critically evaluate these and other journal articles provided.

A national and international focus is maintained throughout as the student gains skills adaptable

to professional opportunities interstate and overseas.

Objectives

Upon completion of this unit the student will be able to:

- a. Identify, classify and interpret both body and genital injuries sustained by a sexual assault victim;
- b. Understand the incidence and prevalence of injury patterns;
- c. Develop a sound knowledge basis of the science and philosophy behind collecting forensic specimens as well as being able to practise competent and proficient collection techniques;
- d. Apply best practice evidence based medicine when evaluating for, preventing and treating injuries, sexually transmitted diseases and pregnancy alongside other issues in therapeutically managing a sexual assault victim;
- e. Communicate effectively with other agencies involved in the management of a sexual



assault case including the handling of sensitive information;
f. Identify special circumstances in which sexual assault occurs and be able to teach and responding to community attitudes surrounding these issues;
g. Critically analyse the role of the health professional in a sexual assault case and the complexities associated with this role; and
h. Apply the knowledge and skills gained from the combination of this and the prerequisite unit to aid in the establishment of a high quality 24 hour service to deal with sexual assault cases.

Assessment

Workbook Activities (20%), Online Discussion (10%), Case Presentations (20%), Residential Participation (10%), Case Study (40%)

Chief examiner(s)

Dr Jo Ann Parkin

Contact hours

Compulsory 3 day workshop each semester

Prerequisites

FOR5001

FOR5004 - Nursing and the criminal justice system

6 points, SCA Band 0 (NATIONAL PRIORITY), 0.125 EFTSL

Refer to the specific [census and withdrawal dates](#) for the semester(s) in which this unit is offered.

Level Postgraduate

Faculty [Faculty of Medicine, Nursing and Health Sciences](#)

Offered [Clayton](#) Second semester 2011 (Off-campus)

Coordinator(s) [Dr Angela Williams](#)

Synopsis

The unit covers four themes: Introduction to the Criminal Justice System and Sexual Offences;

Medico legal Documentation; Rules of Evidence; Giving Evidence and Advocacy Techniques.

Designed to give nursing students knowledge of the legal system (in particular the criminal

justice system), the unit examines the hierarchy of the legal system and the courts. The importance of providing objective and informative opinion evidence to the court and an understanding of the boundaries of being an expert witness is also covered. The moot court

allows students to practice skills and gain confidence in the plan of the courtroom and a site visit

demonstrates and the process and procedures of a trial.

Objectives

Upon completion of this unit the student will be able to:



- a. Understand the basics of the legal system and be able to locate appropriate law in relation to their professional duties;
- b. Demonstrate knowledge of the general principles of the laws of evidence, in particular the rules around opinion evidence;
- c. Understand the role of the expert witness;
- d. Prepare a medico legal report; and
- e. Utilize techniques necessary for managing evidence in chief, cross examination and re examination.

Assessment

Workbook Activities (30%)

Case Studies (30%)

Presentation and Residential participation (10%)

Assignment (10%)

Chief examiner(s)

[Dr Angela Williams](#)

Off-campus attendance requirements

Compulsory 3 day workshop each semester.

Master of Forensic Medicine

This course entry should be read in conjunction with information provided in the 'Faculty information' section of this Handbook by the Faculty of Medicine, Nursing and Health Sciences

Managing faculty [Medicine, Nursing and Health Sciences](#)

Abbreviated title MFoensMed

Total credit points required 72

Standard duration of study (years) 3 years PT

Study mode and location Off-campus ([Clayton](#))

Contact details

Ms Debbie Hellings, course administrator: telephone +61 3 9684 4115;

email debbie.hellings@monash.edu or debbieh@vifm.org

Visit website <http://www.vifm.org>

Course coordinator [Associate Professor David Wells](#)

Notes

- This course is not available to international student visa holders.
- Part-time study only.

Description

This course is designed to further develop medical practitioners knowledge and skills so that they are able to provide a high quality clinical forensic medical service. This will include ethical and



legal issues arising in forensic medical practice, the skills required to interpret injury patterns and communication with the justice system.

Objectives

This course is designed to:

- establish academic standards in clinical forensic medical practice
- produce graduates who have a sound knowledge of medico-legal principles
- develop practitioners skills in providing clinical forensic services in the community
- strengthen the teaching- research nexus in forensic medical education
- foster the development of career pathways in forensic medicine.

Assessment

Assessment activities, including the thesis option, are designed to further develop the participants' understanding of the theoretical principles underpinning forensic practice. Assessment methods will vary but may include coursework and workshop participation, formal assignments, casebooks and minor thesis.

Structure

This course is offered via coursework and minor thesis, or by coursework only. The coursework component comprises core and elective units.

Requirements

Core units

- **FOR4001** Medical evidence
- **FOR4002** Injury interpretation
- **FOR4003** Ethics, medicine and the law

Coursework and minor thesis option

Students complete:

- 48 points of electives
- a minor thesis

Students undertaking the minor thesis are required to prepare a research proposal at an early

stage of their minor thesis enrolment and have this approved by their thesis supervisor.

The area

of research must cover a topic directly related to forensic medicine, and should include at least

one elective unit of instruction on research methodologies and basic statistics.

Coursework only option

Students complete:

- 54 points of electives

Elective units



Students select units from the list below or may also (with departmental approval) choose other graduate units offered by the Faculty of Medicine, Nursing and Health Sciences, other faculties

at Monash University or other tertiary institutions.

- [FOR4004](#) Elements of the forensic sciences
- [FOR4005](#) Child and adolescent sexual abuse
- [FOR4006](#) Non accidental injury in childhood
- [FOR5005](#) Adult sexual assault
- [FOR5006](#) Traffic medicine
- [FOR5007](#) Elements of forensic toxicology
- [FOR5008](#) Custodial medicine
- [FOR5010](#) Project in forensic medicine

Minimum grade for course completion

Students must achieve a minimum distinction grade average in all three core units to qualify for this award. Students who do not achieve this average will exit with a Graduate Certificate of

Forensic Medicine or Graduate Diploma of Forensic Medicine, depending on the units completed, providing all requirements for the award has been met.

Alternative exit(s)

Students may exit this course with a Graduate Certificate of Forensic Medicine or Graduate

Diploma of Forensic Medicine providing all requirements of that award have been met.

Award(s)

Master of Forensic Medicine

FOR4001 - Medical evidence

[print version](#)

6 points, SCA Band 3, 0.125 EFTSL

Refer to the specific [census and withdrawal dates](#) for the semester(s) in which this unit is offered.

Level Postgraduate

Faculty [Faculty of Medicine, Nursing and Health Sciences](#)

Offered [Clayton](#) First semester 2012 ([Off-campus](#))

[Clayton](#) Second semester 2012 ([Off-campus](#))

Coordinator(s) [Associate Professor David Ranson](#)

Synopsis

The law of evidence is a branch of adjectival law. It consists of legal rules, procedural rules and

administrative arrangements whereby courts and tribunals within the justice system receive and



evaluate evidence.

To perform satisfactorily in this field a forensic medical practitioner's communication skills must

be of a high order and they need to understand the legal principles that govern the admissibility of their evidence.

This unit will enable students to gain practical skills in the delivery of medical evidence in courts

and tribunals, in the preparation of medico legal reports to be used as items of evidence and in

the techniques of advocacy that can modify the way in which a medical practitioner's evidence is

received by courts.

Tutorials and presentations will be used to lay the foundations for some of the basic academic

objectives of the course. Workshops will be used to establish witness skills and oral communication techniques and a moot court will be used to develop practical skills in presenting

evidence and developing strategies to deal with the medico legal and advocacy issues that arise

during the examination and cross-examination of witnesses including expert witnesses.

Outcomes

On completion of this unit the student is expected to:

1. display an understanding of decision making processes in legal practice;
2. demonstrate knowledge of the general principles of the laws of evidence;
3. comprehend the special rules regarding opinion evidence;
4. understand the role of the expert witness;
5. be conversant with the rules governing the reception of evidence to the courts;
6. demonstrate competency in preparing medico-legal reports;
7. have developed the skills required to present evidence in court;
8. have acquired the techniques necessary for managing examination-in-chief, cross examination and re-examination.

Assessment

Assignments/Essays (50%)

Casebook Workbook (25%)

Skills Evaluation (25%)

Chief examiner(s)

[Associate Professor David Ranson](#)

Off-campus attendance requirements

Compulsory 2 day workshop

FOR4002 - Injury interpretation

[print version](#)

6 points, SCA Band 3, 0.125 EFTSL



Refer to the specific [census and withdrawal dates](#) for the semester(s) in which this unit is offered.

Level Postgraduate

Faculty [Faculty of Medicine, Nursing and Health Sciences](#)

Offered [Clayton](#) First semester 2012 ([Off-campus](#))

[Clayton](#) Second semester 2012 ([Off-campus](#))

Coordinator(s) [Associate Professor D Wells](#)

Synopsis

The unit focuses on the issues surrounding the interpretation of injuries. Areas include the pathophysiology of injuries with particular reference to the anatomical, physiological and pathological principles; injury classification; documentation including forensic photography;

injury patterns and circumstances of causation. Students will be expected to participate with

clinical and post mortem cases.

Outcomes

On completion of this unit the student will be expected to:

1. display an understanding of the pathophysiology of injuries;
2. show familiarity with the factors limiting accurate injury interpretation;
3. interpret the forces producing injuries;
4. apply the principles of forensic photography;
5. demonstrate a detailed understanding of the classification of injuries;
6. be able to accurately document injuries;
7. analyse and interpret mechanisms and circumstances by which the injuries were sustained.

Assessment

Assignments / Essays (20%)

Case Studies (30%)

Casebook workbook (30%)

Skills Evaluation (20%)

Chief examiner(s)

[Associate Professor David Wells](#)

Off-campus attendance requirements

Compulsory 2 day workshop

FOR4003 - Ethics, medicine and the law

6 points, SCA Band 3, 0.125 EFTSL

Refer to the specific [census and withdrawal dates](#) for the semester(s) in which this unit is offered.

Level Postgraduate

Faculty [Faculty of Medicine, Nursing and Health Sciences](#)

Offered [Clayton](#) First semester 2012 ([Off-campus](#))

[Clayton](#) Second semester 2012 ([Off-campus](#))

Coordinator(s) [Emeritus Professor L Waller](#)



Synopsis

The unit aims to help students become familiar with the tools and vocabulary of ethical discourse in medicine. A framework for this discourse is built, based on the four basic principles of autonomy, beneficence, non-maleficence and justice. The elements which go to make up the Australian Legal System are covered as well as those particular areas of law relating to forensic medical practice, i.e. consent, confidentiality and disclosure, issues at both the beginning and end of life.

Outcomes

The aims of this unit are:

1. to develop the student's awareness and understanding of the ideas and issues in medical ethics so that in practice, the interests of their patients/clients are safeguarded;
2. to develop the student's knowledge and understanding of relevant areas of the law so that in practice their contribution to the justice system is optimal.

Assessment

Assignments / Essays (50%)

Presentations (25%)

Casebook Workbook (25%)

Chief examiner(s)

Emeritus Professor Louis Waller

Off-campus attendance requirements

Compulsory 2 day workshop

FOR4004 - Elements of the forensic sciences

6 points, SCA Band 0 (NATIONAL PRIORITY), 0.125 EFTSL

Refer to the specific [census and withdrawal dates](#) for the semester(s) in which this unit is offered.

Level Postgraduate

Faculty [Faculty of Medicine, Nursing and Health Sciences](#)

Offered [Clayton](#) First semester 2012 ([Off-campus](#))

[Clayton](#) Second semester 2012 ([Off-campus](#))

Coordinator(s) [Mrs Anna Davey](#)

Synopsis

Practitioners need to be familiar with the scope and limitations of the various branches of forensic science to know when and how they may assist in particular cases. Topics to be covered include the principles of forensic science, forensic biology, forensic botany, crime scene examination, specimen collections, forensic anthropology, forensic odontology and forensic



entomology.

Outcomes

On completion of this unit the student is expected to:

1. show familiarity with the principles of forensic science generally and its scope;
2. comprehend the scope and limitations of forensic science generally and its subsections in particular;
3. understand the tests and analyses used in branches of forensic science to assist in the proper application of their results in particular cases;
4. know what specimens would be applicable for forensic science analysis in particular cases;
5. demonstrate competence in the collection storage and security of forensic specimens;
6. evaluate results of forensic scientific analysis meaningfully.

Assessment

Assignments / Essays (25%)

Case Studies (15%)

Presentations (10%)

Casebook Workbook (50%)

Chief examiner(s)

Mrs Anna Davey

Off-campus attendance requirements

Compulsory 2 day workshop

FOR4005 – Child and adolescent sexual abuse

6 points, SCA Band 0 (NATIONAL PRIORITY), 0.125 EFTSL

6 points, SCA Band 0 (NATIONAL PRIORITY), 0.125 EFTSL

EFTSL

Refer to the specific [census and withdrawal dates](#) for the semester(s) in which this unit is offered.

Level Postgraduate

Faculty [Faculty of Medicine, Nursing and Health Sciences](#)

Offered [Clayton](#) First semester 2012 ([Off-campus](#))

[Clayton](#) Second semester 2012 ([Off-campus](#))

Coordinator(s) [Associate Professor David Wells](#)

Synopsis

Paediatric forensic medicine encompasses the medico-legal issues arising from the of provision a medical service to children. The unit will largely focus on the medical assessment of cases of suspected child sexual abuse.

The aim of this unit is to develop student's skills in the evaluation and management of children and adolescents suspected of being sexually abused. Integral to both evaluation and management



will be a knowledge of the relevant legislation, policing and protective agencies, injury patterns, specialised investigative techniques and treatment.

Outcomes

On completion of this unit the student will be expected to:

1. Display a detailed understanding of the roles of health practitioners in assessing cases of suspected child sexual abuse.
2. Demonstrate an understanding of sexual development and behaviour in children.
3. Demonstrate an awareness of the ethical and legal issues relevant to cases of suspected child sexual abuse.
4. Describe normal genital anatomy and physiology, and be able to interpret pathological conditions.
5. Apply medical and forensic principles to the evaluation of cases of suspected child sexual abuse.
6. Display a broad comprehension of the consequences, treatment and prevention of child sexual abuse.
7. Recognise the role of the other disciplines involved in investigations; protective workers, police, lawyers.
8. Recognise the medical and legal implications of a sexually transmitted infection in a child.
9. Display a detailed understanding of the roles of health practitioners in assessing cases of suspected child sexual abuse.
10. Demonstrate an understanding of sexual development and behaviour in children.
11. Demonstrate an awareness of the ethical and legal issues relevant to cases of suspected child sexual abuse.
12. Describe normal genital anatomy and physiology, and be able to interpret pathological conditions.
13. Apply medical and forensic principles to the evaluation of cases of suspected child sexual abuse.
14. Display a broad comprehension of the consequences, treatment and prevention of child sexual abuse.
15. Recognise the role of the other disciplines involved in investigations; protective workers, police, lawyers.
16. Recognise the medical and legal implications of a sexually transmitted infection in a child.

Assessment

Assignment 1 - Workbook questions 2,3,4, and 9: 15%

Assignment 2 - Case critique: 20%

Assignment 3 - Workbook questions 12, 13, 14, 15: 20%

Face to face teaching & case presentation: 15%



Essay: 30%

Chief examiner(s)

Dr Anne Smith

Contact hours

12 hours of study per week over the semester. This will include contact time (25 hours), private study (text and readings), assessment tasks (case studies, assignments), and involvement in case work, plus a compulsory 2 day workshop

Off-campus attendance requirements

Off-campus (distance education) with a two-three day attendance block during the semester.

Additional information on this unit is available from the faculty at:

<http://www.med.monash.edu.au/vifm/>

Additional information on this unit is available from the faculty at:

<http://www.med.monash.edu.au/vifm/>

ملحق 4: مصفوفة المعايير الأكاديمية للبرنامج مع المعايير القياسية العامة

- مواصفات الخريج:

مواصفات الخريج بالمعايير الأكاديمية للبرنامج	Forensic medicine and toxicology program, Department of Forensic Medicine, University of Dundee, 2006. Dundee, Scotland	مواصفات الخريج بالمعايير القياسية العامة لبرامج الدراسات العليا (درجة الدكتوراة)
1.1. Demonstrate competency and mastery of basics, methods and tools of scientific research and clinical audit in forensic medicine and clinical toxicology.	<ul style="list-style-type: none">An attitude which values honesty, frankness, and integrity in scientific research	اتقان اساسيات ومنهجيات البحث العلمى
1.1. Have continuous ability to add knowledge new developments to forensic medicine and clinical toxicology through research and publication	<ul style="list-style-type: none">The ability to plan and execute a significant project of research or investigation	العمل المستمر على الاضافة للمعارف فى مجال التخصص



1.2. Appraise and utilize scientific knowledge to continuously update and improve forensic medicine & clinical toxicology practice and relevant basic sciences.		تطبيق المنهج التحليلي والناقد للمعارف في مجال التخصص والمجالات ذات العلاقة
1.3. Acquire excellent level of medical knowledge in the basic biomedical, clinical, behavioral and clinical sciences, medical ethics and apply such knowledge in patient care in forensic medicine and clinical toxicology.		دمج المعارف المتخصصة مع المعارف ذات العلاقة مستنبطاً ومطوراً للعلاقات البينية بينها
1.5. Demonstrate in depth awareness of public health and health policy issues and share in system-based improvement of health care.	<ul style="list-style-type: none">• A critical awareness of current issues in forensic medicine	اظهار وعيا عميقا بالمشاكل الجارية والنظريات الحديثة في مجال التخصص
1.6. Identify and create solutions for health problems in forensic medicine and clinical toxicology.		تحديد المشكلات المهنية وابداع حلولاً مبتكرة لحلها
1.6. Acquire an in depth understanding of common areas of forensic medicine and clinical toxicology from basic clinical care to evidence based clinical application, and possession of skills to manage independently all problems in these areas.		1.7. اتقان نطاقاً واسعاً من المهارات المهنية في مجال التخصص

<p>1.7. Function effectively to provide patient care that is appropriate, compassionate for dealing with health problems and health promotion.</p>		<p>التوجه نحو تطوير طرق وادوات واساليب جديدة للمزاولة المهنية</p>
<p>1.9. Use recent technologies to improve his practice in forensic medicine and clinical toxicology.</p>	<ul style="list-style-type: none"> • The ability to use a wide range of software to support and enhance the above 	<p>استخدام الوسائل التكنولوجية المناسبة بما يخدم ممارسة المهنة</p>
<p>1.8. Demonstrate leadership competencies including interpersonal and communication skills that ensure effective information exchange with individual patients and their families and teamwork with other health professions, the scientific community and the public.</p>	<ul style="list-style-type: none"> • The ability to communicate with peers and more senior specialists orally and in writing 	<p>التواصل بفاعلية وقيادة فريق عمل في سياقات مهنية مختلفة</p>
<p>1.11. Master decision making capabilities in different situation related to forensic medicine and clinical toxicology.</p>		<p>1.11. اتخاذ القرار في ظل المعلومات المتاحة</p>
<p>1.12. Employee the available medical data effectively obtained during diagnosis of different forensic and toxicological conditions, develop them and find new medical resources.</p>		<p>1.12. توظيف الموارد المتاحة بكفاءة وتنميتها والعمل على ايجاد موارد جديدة</p>
<p>1.13. Demonstrate awareness of his role</p>		<p>1.13. الوعي بدوره في تنمية المجتمع والحفاظ على البيئة</p>



in community development and environmental preservation.		
1.14. Show model attitudes and professionalism.		1.14. التصرف بما يعكس الالتزام بالنزاهة والمصادقية وقواعد المهنة
1.15. Function as teacher in relation to colleagues, medical students and other health professions with concomitant lifelong learning and maintenance of competence and ability for continuous medical education in forensic medicine and clinical toxicology.		1.15. الالتزام بالتنمية الذاتية المستمرة ونقل علمه وخبراته للآخرين

أ - المعرفة والفهم:

المعايير الأكاديمية للبرنامج	المعايير القياسية العامة (Generic) لبرامج الدراسات العليا (درجة الدكتوراة)
2.1.1.Recent advances, areas under research as well as the basic principles and theories in the field of forensic science, clinical toxicology and analytical toxicology.	بانتهاج دراسة برنامج الدكتوراة يجب ان يكون الخريج قادرا على الفهم والدراية بكل من: ١-١-٢ النظريات والاساسيات والحديث من المعارف في مجال التخصص والمجالات ذات العلاقة



2.1.2.Scientific research ethics, research methodology & research design; basic including principles of research, how research is conducted, evaluated, explained to patients, and applied to patient care.	٢-١-٢ اساسيات ومنهجيات واخلاقيات البحث العلمى وادواته المختلفة.
2.1.3.Legal and medicolegal aspects in practice of clinical toxicology and forensic medicine as well as the medical ethics and responsibility.	٣-١-٢ المبادئ الاخلاقية والقانونية للممارسة المهنية فى مجال التخصص
2.1.4.Principles and basic concepts of quality in professional practice including planning, improvement of performance and control of practicing outcomes.	٤-١-٢ مبادئ واساسيات الجودة فى الممارسة فى مجال التخصص
2.1.5.Knowledge related to environmental development, patient safety, safe occupational practice, serving communities and research results in improving public health outcomes.	٥-١-٢ المعارف المتعلقة بأثار ممارسته المهنية على البيئة وطرق تنمية البيئة وصيانتها

ب - القدرات الذهنية :

المعايير الأكاديمية للبرنامج	المعايير القياسية العامة (Generic) لبرامج الدراسات العليا (درجة الدكتوراة)
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<p>2.2.1. Medical data analysis, interpretation, evaluation and proper therapy choice.</p>	<p>بانتهاة دراسة برنامج الدكتوراه يجب ان يكون الخريج قادرا على: ١-٢-٢ تحليل وتقييم المعلومات في مجال التخصص والقياس عليها والاستنباط منها</p>
<p>2.2.2. Medical problem solving and Evidence-based medicine according to the available medical data.2.2.9</p>	<p>٢-٢-٢ حل المشاكل المتخصصة استنادا على المعطيات المتاحة</p>
<p>2.2.3. Participation in research development and innovation.</p>	<p>٣-٢-٢ اجراء دراسات بحثية تضيف الى المعارف</p>
<p>2.2.4. Scientific paper reviewing and editing.</p>	<p>٤-٢-٢ صياغة أوراق علمية</p>
<p>2.2.5. Risk assessment in medical practice.</p>	<p>٥-٢-٢ تقييم المخاطر في الممارسات المهنية</p>
<p>2.2.6. Planning for improvement of professional performance in the field of forensic medicine and clinical toxicology.</p>	<p>٦-٢-٢ التخطيط لتطوير الاداء في مجال التخصص</p>
<p>2.2.7. Decision making skills in different professional situations.</p>	<p>٧-٢-٢ اتخاذ القرارات المهنية في سياقات مهنية مختلفة</p>
<p>2.2.8. Development, innovation and medical breakthrough.</p>	<p>٨-٢-٢ الابتكار/الابداع</p>
<p>2.2.9. Evidence based discussion.</p>	<p>٩-٢-٢ الحوار والنقاش المبني على البراهين والادلة</p>

ج. مهارات مهنية وعملية :

المعايير الأكاديمية للبرنامج	المعايير القياسية العامة (Generic) لبرامج الدراسات العليا (درجة الدكتوراة)
2.3.1. Professionalism and up to date medical practice in the field of forensic medicine and clinical toxicology.	بانتهاؤ دراسة برنامج الدكتوراة يجب ان يكون الخريج قادرا على: ١-٣-٢ اتقان المهارات المهنية الاساسية والحديثة في مجال التخصص
2.3.2. Medical and medicolegal reports writing and evaluation.	٢-٣-٢ كتابة وتقييم التقارير المهنية
2.3.3. Ability to investigate and evaluate their diagnostic and investigational tools, to continuously improve patient care based.	٣-٣-٢ تقييم وتطوير الطرق والادوات القائمة في مجال التخصص
2.3.4. Effective use of Internet Technology and healthcare information system in medical practice and patient medical records to optimize learning; and participate in the education of patients, families, students, residents and other health professionals.	٤-٣-٢ استخدام الوسائل التكنولوجية بما يخدم الممارسة المهنية
2.3.5. Planning for improvement of professional performance in the field of forensic medicine and clinical toxicology practice.	٥-٣-٢ التخطيط لتطوير الممارسة المهنية وتنمية اداء الاخرين

د . مهارات عامة :

المعايير الأكاديمية للبرنامج	المعايير القياسية العامة (Generic) لبرامج الدراسات العليا (درجة الدكتوراة)
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<p>2.4.1. Effective Interpersonal and communication skills that result in the exchange of information and collaboration with patients, their families, and health professionals.</p>	<p>بانتهاء دراسة برنامج الدكتوراه يجب أن يكون الخريج قادرا على: ١-٤-٢ التواصل الفعال بأنواعه المختلفة</p>
<p>2.4.2. Use of Internet Technology and healthcare information system in medical practice.</p>	<p>٢-٤-٢ استخدام تكنولوجيا المعلومات بما يخدم تطوير الممارسة المهنية</p>
<p>2.4.3. Teaching and evaluation skills of the others as senior staff.</p>	<p>٢-٤-٢ تعليم الاخرين وتقييم ادائهم</p>
<p>2.4.4. Self-appraisal and needs evaluation.</p>	<p>٤-٤-٢ التقييم الذاتى والتعليم المستمر</p>
<p>2.4.5. Accessibility to specialty-specific and other appropriate reference materials in print or in electronic format.</p>	<p>٥-٤-٢ استخدام المصادر المختلفة للحصول على المعلومات والمعارف</p>
<p>2.4.6. Teamwork/leadership.</p>	<p>٦-٤-٢ العمل فى فريق وقيادة فرق العمل</p>
<p>2.4.7. Time management and meeting organization.</p>	<p>٧-٤-٢ ادارة اللقاءات العلمية والقدرة على ادارة الوقت</p>

ملحق ٥: مصفوفة مضاهاة المعايير الأكاديمية للبرنامج و أهداف و نواتج تعلم البرنامج

أهداف البرنامج	المعايير الأكاديمية للبرنامج (مواصفات الخريج)
1.1.Acquire Detailed and advanced knowledge and skills necessary for practicing and adding new concepts in forensic medicine, and clinical toxicology.	1.2. 1.5.
1.2.Integrate the medical data of forensic medicine and toxicology properly in the service of justice.	1.3., 1.6., 1.8.
1.3.Accept decision making capabilities in different situation related to forensic medicine and clinical toxicology.	1.11.
1.4.Percept lifelong learning competencies necessary for continuous professional development; self-learning and basis of medical research in field of forensic medicine & clinical toxicology.	1.1., 1.15.
1.5.Function as leader of a team to provide patient care that is appropriate for dealing with health problems and health promotion.	1.10
1.6. Create solutions for health problems facing him/her	1.5., 1.6., 1.8., 1.12,

during practicing forensic medicine & clinical toxicology.	1.13
1.7. <i>Accept</i> communication and interpersonal skills necessary for effective information exchange with patients and their families and with other health professions.	1.10.
1.8. <i>Acquire</i> professionalism and attitudes in relation to colleagues, medical students and other health professions.	1.14
1.9. <i>Show</i> awareness of decision making capabilities in different situation related to forensic medicine and clinical toxicology.	1.11.
1.10. <i>Use</i> recent technologies to improve his practice in forensic medicine and clinical toxicology.	1.9.

نواتج تعلم البرنامج										المعايير الأكاديمية للبرنامج	
المعرفة و الفهم											
	2.a.10	2.a.9	2.a.8	2.a.7	2.a.6	2.a.5	2.a.4	2.a.3	2.a.2.		2.a.1.
						✓	✓	✓	✓	✓	المعرفة و الفهم: <i>By the end of MD program, candidate should be able to understand the followings:</i> 2.1.1. Recent advances, areas under research as well as the basic principles and theories in the field of forensic science, clinical toxicology and analytical toxicology.

					√						2.1.2. Scientific research ethics, research methodology & research design; basic including principles of research, how research is conducted, evaluated, explained to patients, and applied to patient care.
					√						2.1.3. Legal and medicolegal aspects in practice of clinical toxicology and forensic medicine as well as the medical ethics and responsibility.
		√									2.1.4. Principles and basic concepts of quality in professional practice including planning, improvement of performance and control of practicing outcomes.
			√								2.1.5. Knowledge related to environmental development, patient safety, safe occupational practice, serving communities and research results in improving public health outcomes.

نواتج تعلم البرنامج										المعايير الأكاديمية للبرنامج المهارات الذهنية
Intellectual skills										
2.b.1	2.b.2.	2.b.3	2.b.4	2.b.5	2.b.6	2.b.7	2.b.8	2.b.9	2.b.10	



				√				√	√	<p><i>By the end of MD program, candidate should be able to recognize and mastering the following skills:</i></p> <p>2.2.1. Medical data analysis, interpretation, evaluation and proper therapy choice.</p>
		√			√			√		2.2.2 Medical problem solving and Evidence-based medicine according to the available medical data.
						√				2.2.3. Participation in research development and innovation.
						√				2.2.4. Scientific paper reviewing and editing.
								√		2.2.5. Risk assessment in medical practice.
√										2.2.6. Planning for improvement of professional performance in the field of forensic medicine and clinical toxicology.
			√					√		2.2.7. Decision making skills in different professional situations.
√										2.2.8. Development, innovation and medical breakthrough.
	√			√						2.2.9. Evidence based discussion.

نواتج تعلم البرنامج										المعايير الأكاديمية للبرنامج المهارات المهنية	
Practical/Professional skills											
									2.c.1.	√	Professionalism and up to date medical practice in the field of forensic medicine and clinical toxicology.
									2.c.2.	√	Medical and medicolegal reports writing and evaluation.
									2.c.3.	√	Ability to investigate and evaluate their diagnostic and investigational tools, to continuously improve patient care based.
									2.c.4.	√	Effective use of Internet Technology and healthcare information system in medical practice and patient medical records to optimize learning; and participate in the education of patients, families, students, residents and other health professionals.
									2.c.5.	√	Planning for improvement of professional performance in the field of forensic medicine and clinical toxicology practice.
									2.c.6.	√	
									2.c.7.	√	

نواتج تعلم البرنامج										المعايير الأكاديمية للبرنامج				
General and transferable skill										المهارات العامة والمنتقلة				
				2.d.8	2.d.7	2.d.6	2.d.5	2.d.4	2.d.3	2.d.2.	2.d.1.			
						√	√		√	√		Effective Interpersonal and communication skills that result in the exchange of information and collaboration with patients, their families, and health professionals.		
											√	Use of Internet Technology and healthcare information system in medical practice.		
				√								Teaching and evaluation skills of the others as senior staff.		
				√								Self-appraisal and needs evaluation.		
										√	√	Accessibility to specialty-specific and other appropriate reference materials in print or in electronic format.		
								√				Teamwork/leadership.		
					√							Time management and meeting organization.		





ملحق 6: Program-Courses ILOs Matrix

المعارف Knowledge & Understanding										ILOs	
a.10	a.9	2.a.8	2.a.7	2.a.6	2.a.5	2.a.4	2.a.3	2.a.2	2.a.1	Courses & codes	
					■					FORE & TOXI 701	Forensic toxicology & occupational toxicology
					■					FORE & TOXI 702	Forensic chemistry
					■					FORE & TOXI 703	Medical ethics
					■					FORE & TOXI 704	Pathology
				■						FORE & TOXI 705	General medicine
			■							FORE & TOXI 706	Research methodology
		■								FORE & TOXI 707	Forensic pathology
■	■						■	■	■	FORE & TOXI 708	Clinical forensic medicine
■	■					■				FORE & TOXI 709	General Clinical toxicology
										FORE & TOXI 710	Special Clinical toxicology



مهارات ذهنية Intellectual Skills											ILOs	
11	10	B9	B8	2.b.7	2.b.6	2.b.5	2.b.4	2.b.3	2.b.2	2.b.1	Courses & codes	
					■						FORE & TOXI 701	Forensic toxicology & occupational toxicology
					■						FORE & TOXI 702	Forensic chemistry
					■						FORE & TOXI 703	Medical ethics
					■						FORE & TOXI 704	Pathology
		■									FORE & TOXI 705	General medicine
						■					FORE & TOXI 706	Research methodology
			■				■		■	■	FORE & TOXI 707	Forensic pathology
■	■					■	■	■	■		FORE & TOXI 708	Clinical forensic medicine
											FORE & TOXI 709	General Clinical toxicology
■			■	■		■	■	■	■	■	FORE & TOXI 710	Special Clinical toxicology



مهارات عملية و مهنية Practical & Clinical Skills								ILOs	
	2.c.7	2.c.6	2.c.5	2.c.4	2.c.3	2.c.2	2.c.1	Courses & codes	
	■		■					FORE & TOXI 701	Forensic toxicology & occupational toxicology
								FORE & TOXI 702	Forensic chemistry
								FORE & TOXI 703	Medical ethics
	■							FORE & TOXI 704	Pathology
								FORE & TOXI 705	General medicine
		■						FORE & TOXI 706	Research methodology
							■	FORE & TOXI 707	Forensic pathology
		■	■	■	■	■		FORE & TOXI 708	Clinical forensic medicine
		■				■	■	FORE & TOXI 709	General Clinical toxicology
								FORE & TOXI 710	Special Clinical toxicology

مهارات عامة General and transferable

ILOs



2.d.8	2.d.7	2.d.6	2.d.5	2.d.4	2.d.3	2.d.2	2.d.1	Courses & codes	
							■	FORE & TOXI 701	Forensic toxicology & occupational toxicology
							■	FORE & TOXI 702	Forensic chemistry
							■	FORE & TOXI 703	Medical ethics
							■	FORE & TOXI 704	Pathology
	■						■	FORE & TOXI 705	General medicine
							■	FORE & TOXI 706	Research methodology
	■	■	■	■			■	FORE & TOXI 707	Forensic pathology
■	■	■	■	■	■	■	■	FORE & TOXI 708	Clinical forensic medicine
■	■	■	■	■	■	■	■	FORE & TOXI 709	General Clinical toxicology
								FORE & TOXI 710	Special Clinical toxicology

رئيس القسم

أستاذ المادة

التوقيع : أ.د./

التوقيع :

شيرين الخولى

وافق مجلس القسم بتاريخ ٨-٩-٢٠٢٠ رقم () بند رقم



Benha University

Faculty of Medicine

Department of Forensic Medicine and Clinical Toxicology

Course Specifications

Course title: *Forensic toxicology & occupational toxicology*

Code: *FORE & TOXI 701*

Academic Year **(2020– 2021)**

- **Department offering the course:** Forensic Medicine and Clinical Toxicology.
- **Major or minor elements of the program:** Major.
- **Academic level:** First part of the program.
- **Date of specification approval:**
 - Department council: date: 8 / 9 /2020.
 - Faculty council date: 21 / 9 /2020.

A) Basic Information:

- **Allocated marks:** 100 marks.
- **Course duration:** 15 weeks of teaching.
- **Credit hours:** 2 hours
- **Teaching hours:** 3 hours / week.

Method of teaching	Teaching Hours / week	Total hours
1- Lectures/ Seminars/ Case based learning/ Directed self-learning	2	30
2- Practical / Clinical	1	15
Total	3	45

B) Professional Information:

1- Overall Aim of the Course:

- To provide scientific **knowledge** of Forensic toxicology related to their medico-legal practice.
- To provide **practical and clinical skills** necessary for proper dealing with intoxicated dead individuals.
- To provide the students with **professional education and communication skills** essential for establishing & maintaining good doctor/ patient relationship, appropriate attitudes with colleagues and para-medicals.

2- Intended Learning Outcomes (ILOs):

2.a. Knowledge and understanding:

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

- 2.a.1. Describe** different methods of detection, collection, preservation and analysis of toxicological samples.
- 2.a.2. State** different types of samples and their sources in the field of forensic toxicology.
- 2.a.3. Illustrate** role of forensic pathologist in deaths from acute and chronic alcoholism.
- 2.a.4. List** the autopsy findings in carbon monoxide poisoning.
- 2.a.5. Classify pesticides according to WHO and differentiate** main dangers from agricultural chemicals lie in the pesticides and the autopsy finding.
- 2.a.6. Distinguish autopsy appearances of** analgesics, paracetamol, antidepressant, benzodiazepines, phenothiazines, barbiturates and insulin poisoning.
- 2.a.7. Judge** deaths from narcotics and hallucinogenic drugs.
- 2.a.8. Explain** the role of forensic pathologist in examining victims of cyanide, corrosive acids, alkalis and phenols, oxalic acid and oxalate salts, ethylene glycol poisoning and metallic poisons.
- 2.a.9. Enumerate** autopsy findings in deaths from organic solvents.

2.b. Practical Skills

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

- 2.b.1. *Analyze* biological tissue for toxicological purposes.
- 2.b.2. *Identify* toxicological samples required for diagnosis of intoxicated deaths.
- 2.b.3. *Diagnose* some common studied deaths of intoxicated cases (alcohol, carbon monoxide, organophosphorus, poisoning by medicines, narcotic and hallucinogenic drugs, corrosive, metallic poisoning, deaths from organic solvents).

2.c. Intellectual Skills:

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

- 2.c.1. *Interpret* case scenario of forensic toxicology cases to put a proper plan for their autopsy.
- 2.c.2. *Differentiate* between similar cases of intoxication to formulate precise and accurate differential diagnosis of deaths in intoxicated cases.
- 2.c.3. *Analyze* different problems of interpretation of samples in the field of forensic toxicology (alcohol, carbon monoxide, organophosphorus, poisoning by medicines, narcotic and hallucinogenic drugs, corrosive, metallic poisoning, deaths from organic solvents).

2.d. General and transferable Skills:

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

- 2.d.1. *Establish* life-long self-learning required for continuous professional development.
- 2.d.2. *Use* the sources of biomedical information and communication technology to remain current with advances in knowledge and practice.

2.d.3. *Retrieve*, manage, and manipulate information by all means, including electronic means.

2.d.4. *Present* information clearly in written, electronic and oral forms.

2.d.5. *Establish* effective interpersonal relationship to communicate ideas and arguments.

3- Course contents: _____ :

Subject	Lectures (hrs)	%	Practical (hrs)	%	Total (hrs)	% of Total
1. Analysis of biological tissue for toxicological purposes.	3	10	3	20	6	13.3 %
2. Sampling.	2	6.7	5	33.3	7	15.6 %
3. Forensic Aspects of Alcohol	3	10	-	-	3	6.7 %
4. Carbon Monoxide Poisoning	3	10	2	13.3	5	11.1
5. Organophosphorus Poisoning	3	10	2	13.3	5	11.1
6. Poisoning by Medicines	5	13.3	3	20	8	17.8
7. Death from Narcotic and Hallucinogenic Drugs	3	10	-	-	2	4.4
8. Corrosive and Metallic Poisoning	5	13.3	-	-	5	11.1
9. Deaths from Organic solvents	3	10	-	-	3	6.7
TOTAL	30	100	15	100	45	100%

4- Teaching and learning methods:

METHODS USED:

1. Modified lectures.
2. Seminars.
3. Directed self-learning.
4. Case based learning
5. Practical/clinical classes.

Method	Evidence	ILOs
--------	----------	------

Modified lectures	CDs of lectures including (video films, brainstorming, problem solving, etc...)	2.a.1----2.a.9., 2.c.1----2.c.3 2.d.1----2.d.5
Case based learning	Case scenarios	2.a.1----2.a.9., 2.c.1----2.c.3 2.d.1----2.d.5
Directed self-learning.	Log book	2.a.1----2.a.9., 2.c.1----2.c.3 2.d.1----2.d.5
Seminars	Log book	2.a.1----2.a.9., 2.c.1----2.c.3 2.d.1----2.d.5
Practical classes	Toxicological reports, log book.	2.b.1----2.b.3

5- Students Assessment methods:

5-A) ATTENDANCE CRITERIA:

1. Lectures/seminars (at least 50% attendance).
2. Practical & clinical (at least 75% attendance).
3. Log book (practical reports & students activity).

5-B) Assessment TOOLS:

Tool	Evidence	Purpose (ILOs)
Written examination: <ul style="list-style-type: none"> • MCQs • Case study • Short essay • True or false with explanation 	Attached module of examination	2.a.1----2.a.9., 2.c.1----2.c.3 2.d.1----2.d.5
Oral examination	Viva card system	2.a.1----2.a.9., 2.c.1----2.c.3 2.d.1----2.d.5
Practical & clinical examination [OSPE/OSCE]	Practical, clinical & Reports	2.b.1----2.b.3

5-C) TIME SCHEDULE:

Exam	Week
1- Formative Assessments	8
2- Final exam	15

FORMATIVE ASSESSMENT:

- Student knows his marks after the Formative exams.

5-D) Weighting System:

Examination	Marks allocated	% of Total Marks
a- Written		50
b- Practical & Field training	50 30	30
c- Oral	20	20
Total	100	100

5-E) Examination description :

Examination	Description
End semester:	
a- Written	Short assay, select (MCQs), & case study, true or false with explanations.
b- Practical	Write reports and comments on specimens
c- Oral	Viva cards divided into in two sessions
c- Oral	Two sessions (forensic and toxicology)
3- Assignments & other activities	Round assignments, projects , log book... etc.

6- List of references:

6.1- Basic materials:

- Department books by staff members

6.2- Essential books (textbooks):

- Clarke's Analytical Forensic Toxicology, Negrusz, Adam; Cooper, Gail- Second edition, 2013.
- Emergency toxicology: Peter viccellio.
- Analytical Toxicology for Clinical, Forensic and Pharmaceutical Chemists

- Clinical biochemistry : principles, methods, applications Clinical biochemistry, Hans Brandenberger, Robert A. A. Maes-Walter de Gruyter, 1997.

6.3- Recommended books:

- Fundamentals of Analytical Toxicology, Robert J. Flanagan, Andrew A. Taylor, Ian D. Watson, Robin Whelpton, 2008.
- Lewis' Dictionary of Toxicology.
- Biological weapons threat& control.

6.4- Periodicals, Web sites, etc:

- <http://www.pubmed.com>.
- <http://sciencedirect.com>.

7- Facilities required for teaching and learning:

Facilities used for teaching this course include:

- Faculty lecture hall.
- Department lectures halls: two
- Museum hall: SIXTH floor
- Department lab.
- Poison control unit.



مصفوفة المعارف والمهارات المستهدفة من المقرر الدراسي

جامعة/ بنها كلية / الطب البشرى قسم/ الطب الشرعى و السموم الاكلينيكية

السموم الطبية الشرعية و السموم المهنية	مسمى المقرر
FORE & TOXI 701	كود المقرر

المحتويات للمقرر	أسبوع الدراسة	المعارف الرئيسية	مهارات ذهنية	مهارات مهنية	مهارات عامة

2.d.3	2.b.1	-	2.a.1	1,2	1. Analysis of biological tissue for toxicological purposes.
2.d.2	2.b.2	-	2.b.2	3	2. Sampling.
2.d.2 2.d.3	2.b.3	2.c.1 2.c.2 2.c.3	2.b.3	4,5	3. Forensic Aspects of Alcohol
2.d.1 2.d.4	2.b.3	2.c.1 2.c.2 2.c.3	2.b.4	5,6	4. Carbon Monoxide Poisoning
2.d.2 2.d.5	2.b.3	2.c.1 2.c.2 2.c.3	2.b.5	6,7	5. Organophosphorus Poisoning
2.d.2 2.d.3	2.b.3	2.c.1 2.c.2 2.c.3	2.b.6	8,9,10	6. Poisoning by Medicines
2.d.4 2.d.5	2.b.3	2.c.1 2.c.2 2.c.3	2.b.7	11,12	7. Death from Narcotic and Hallucinogenic Drugs
2.d.3 2.d.1	2.b.3	2.c.1 2.c.2 2.c.3	2.b.8	13,14	8. Corrosive and Metallic Poisoning
2.d.2 2.d.4	2.b.3	2.c.1 2.c.2 2.c.3	2.b.9	15	9. Deaths from Organic solvents

Course coordinator: prof. Abdolmonem G. Madboly.

Head of Department: Prof. Sheren El-kholy.

Date: 8 September 2020



Benha University

Faculty of Medicine

Department of Forensic Medicine and Clinical Toxicology

Course Specifications

Course title: ...Forensic Chemistry.....

Code: FORE&TOXI 702

Academic Year (2020- 2021)

- **Department offering the course:** Forensic Medicine and Clinical Toxicology Department.....
- **Major or minor elements of the program...**Major element.....
- **Academic level:** First partdoctorate degree.....
- **Date of specification approval:**
 - Department council: date: 8 / 9 /2021.
 - Faculty council date: / 9 /2021.

A) Basic Information:

- **Allocated marks:** ...50..... marks.
- **Course duration:** (one semester)...15..... weeks of teaching.
- **Credit hours:** ...1..... hours
- **Teaching hours:** ...15..... hours / week.

Method of teaching	Teaching Hours / week	Total hours
1- Lectures/ Seminars/ Case based learning/ Directed self-learning	1/ week	15
2- Practical / Clinical	2 /week	30
Total	45	45

B) Professional Information:

1- Overall Aim of the Course:

- To provide scientific **knowledge** of DNA identification and analysis
- To provide scientific **knowledge** about quantity and quality of D.N.A samples
- To provide scientific **knowledge** about Dactylography & DNA fingerprint.
- To provide scientific knowledge about crime scene.
- To provide **practical and clinical skills** necessary for proper dealing with physical evidences.
- To provide practical and clinical skills for proper dealing with bullets.

2- Intended Learning Outcomes (ILOs):

2.a. Knowledge and understanding:

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

- 2.a.10. State** general steps of identification of DNA sample
- 2.a.11. Explain** procedure of DNA analysis
- 2.a.12. Discuss** Procedure for determination quantity and quality of D.N.A
- 2.a.13. Enumerate** different types of physical evidences
- 2.a.14. List** steps of identification of physical evidences.
- 2.a.15. Explain** methods of identification and analysis of each physical evidence.
- 2.a.16. Discuss Crime Scene Investigations and Chemical analysis of Physical Evidences.**
- 2.a.17. List** methods of Analysis of trace evidences:(Glass, Soil,)
- 2.a.18. Discuss** Fire and arson investigation
- 2.a.19. State** types and effects of explosives
- 2.a.20. Explain** firearm and tool marks
- 2.a.21. Discuss** impression tools, sexual assault evidence

2.a.22. Explain Entomo-toxicology: drugs- toxins and insects.

2.b. Practical Skills: *By the end of the course, students should be able to*

2.c. Intellectual Skills:

2.b.1. **Identify** different types of physical evidences (blood, semen, saliva, hair,)

2.b.2. **Analyze** methods of sampling of different physical evidences in Forensic practice

2.b.3. **Analyze** different problems of interpretation of samples.

2.b.4. **Interpret** common medicolegal implications associated with DNA typing.

2.b.5. **Identify different** types of bullets.

2.b.6. **Identify** sexual abuse kits and how it works

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

2.c.1. **Correlate** between different physical evidences and different samples in case scenarios of forensic medicine to reach proper diagnosing of case.

2.c.2. **Interpret** common medicolegal implications associated with DNA typing.

2.c.3. **Analyze** different risks of interpretation of physical evidence collection and preservation.

2.c.4. **Design** crime scene worksheet.

2.c.5. **Design** different Forensic reports (child abuse, abortion, permanent infirmity,)

2.d. General and transferable Skills:

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

2.d.1. Establish life-long self-learning required for continuous professional development.

2.d.2. Use the sources of biomedical information and communication technology to remain current with advances in knowledge and practice.

2.d.3. Retrieve, manage, and manipulate information by all means, including electronic means.

2.d.4. Present information clearly in written, electronic and oral forms.

2.d.5. Establish effective interpersonal relationship to communicate ideas and arguments.

3- Course contents: _____ :

Subject	Lectures (hrs)	%	Practical (hrs)	%	Total (hrs)	% of Total
1- D.N.A Identification:	2	5	6	5	8	5 %
2- DNA analysis:	1	3	6	5	7	5 %
3- DNA Typing	1	5	6	5	7	5%
4- Mitochondrial DNA:	1	2	-	-	1	5 %
5- Identification& types of physical evidence	2	5	6	10	8	10 %
6- Blood stain:	2	10	4	10	6	10 %
7- Seminal stain:	1	10	3	10	4	5 %
8- Hair	1	10	4	10	5	5%

9 -Urine stain Saliva Fecal stain Vaginal stain Teeth and bite marks	2	5	2	10	5	5%
10- Dactylography	1	5	2	5	5	5%
11- Non biological evidences	1	2	2	5	4	5%
12-Crime Scene Investigations and Chemical analysis of Physical Evidences:	2	5	2	5	4	5%
13-Fire / arson investigations:	2	10	---	----	2	5%
14-Explosives and Explosions:	2	5	-----	----	2	5%
15-Firearm and tool marks.	2	3	2	10	4	5%
16- Impression evidence:	2	5	----	----	2	5%
17-Sexual assault evidences.	1	5	2	10	3	5%
18-Entomo-toxicology:	4	10	-----	----	4	5%
TOTAL	30	100	45	100	75	100%

4- Teaching and learning methods:

METHODS USED:

6. Modified lectures.
7. Seminars.
8. Directed self-learning.
9. Case based learning
10. Practical/clinical classes.

Method	Evidence	ILOs
Modified lectures	CDs of lectures including (video films, brainstorming, problem solving, etc...)	2.a.1-----2.a.13., 2.c.1.----2.c.3 2.d.1.----2.d.5
Case based learning	Case scenarios	2.a.1-----2.a.6., 2.c.1.----2.c.5 2.d.1.----2.d.5

Directed self-learning.	Log book	2.a.1-----2.a.13, 2.c.1-----2.c.5 2.d.1-----2.d.5
Seminars	Log book	2.a.1-----2.a.13, 2.c.1-----2.c.5 2.d.1-----2.d.5
Practical classes	Toxicological reports, log book.	2.b.1.----2.b.6

5- Students Assessment methods:

5-A) ATTENDANCE CRITERIA:

4. Lectures/seminars (at least 50% attendance).
5. Practical & clinical (at least 75% attendance).
6. Log book (practical reports & students activity).

5-B) Assessment TOOLS:

Tool	Evidence	Purpose (ILOs)
Written examination: <ul style="list-style-type: none"> • MCQs • Case study • Short essay • True or false with explanation 	Attached module of examination	2.a.1-----2.a.13, 2.c.1-----2.c.5 2.d.1-----2.d.5
Oral examination	Viva card system	2.a.1-----2.a.13, 2.c.1-----2.c.5 2.d.1-----2.d.5
Practical & clinical examination [OSPE/OSCE]	Practical, clinical & Reports	2.b.1.----2.b.6

5-C) TIME SCHEDULE:

Exam	Week
1- Formative Assessments	
2- Final exam	

FORMATIVE ASSESSMENT:

- Student knows his marks after the Formative exams.

5-D) Weighting System:

Examination	Marks allocated	% of Total Marks
c- Written	20	40%
d- Practical & Field training	20	40%
c- Oral	10	20%
Total	50	100%

5-E) Examination description :

Examination	Description
End semester:	
d- Written	Short assay, select (MCQs), & case study, true or false with explanations.
e- Practical	Write reports and comments on specimens
f- Oral	Viva cards divided into in two sessions
c- Oral	Two sessions (forensic and toxicology)
3- Assignments & other activities	Round assignments, projects , log book... etc.

6- List of references:

6.1- Basic materials:

- Department books by staff members

6.2- Essential books (textbooks):

- **Simpsons Forensic Medicine, 14th edition pdf, 2019.**
- **DiMaio Forensic Pathology, 2021**
- **Knight Forensic Pathology 4th edition PDF (2015).**
- **Crime scene investigation case studies (Step by Step from the crime scene to the Courtroom).**
- **Forensic Chemistry Fundamentals and Applications.PDF**

6.3- Periodicals, Web sites, etc:

- <http://www.pubmed.com>.
- <http://sciencedirect.com>.

7- Facilities required for teaching and learning:

Facilities used for teaching this course include:

- Faculty lecture hall
- Department lectures halls: two
- Museum hall: SIXTH floor

- Department lab.

مصنوفة المعارف والمهارات المستهدفة من المقرر الدراسي

جامعة/ : كلية / قسم

كمياء طبية شرعية	مسمى المقرر
: FORE&TOXI 603	كود المقرر

المحتويات للمقرر	أسبوع الدراسة	المعارف الرئيسة	مهارات ذهنية	مهارات مهنية	مهارات عامة
DNA	الاسبوع الاول	2.a.1,2.a.2,2.a.3	2.c.2	2.b.4	2.d.1.....2.d.6
BIOLOGICAL EVIDENCE	الاسبوع الثانى	2.a.4,2.a.5,2.a.6	2.c.1,2.c.3	2.b.1, 2.b.2	2.d.1.....2.d.6
BLOOD	الاسبوع الثالث	2.a.4,2.a.5,2.a.6	2.c.1,2.c.3	2.b.1, 2.b.2,2.b.3	2.d.1.....2.d.6
SEMEN	الاسبوع الرابع والخامس	2.a.4,2.a.5,2.a.6	2.c.1,2.c.3	2.b.1, 2.b.2,2.b.3	2.d.1.....2.d.6
HAIR	الاسبوع الخامس	2.a.4,2.a.5,2.a.6	2.c.1,2.c.3	2.b.1, 2.b.2, 2.b.3	2.d.1.....2.d.6
URINE, SALIVA,.....	الاسبوع السادس	2.a.4,2.a.5,2.a.6	2.c.1,2.c.3	2.b.1, 2.b.2,2.b.3	2.d.1.....2.d.6
DACTYLOGRAPHY	الاسبوع السابع	2.a.4,2.a.5,2.a.6	2.c.1,2.c.3	2.b.1, 2.b.2,2.b.3	2.d.1.....2.d.6

2	d.1.....2.d.6	2.b.1, 2.b.2, 2.b.3	2.c.1,2.c. 3	2.a.4,2.a.5,2.a.6,2. a.8	الاسبوع الثامن	NON BIOLOGICAL EVIDENCE
2	d.1.....2.d.6	2.b.1, 2.b.2, 2.b.3	2.c.4	2.a.7	الاسبوع التاسع	Crime Scene Investigations
2	d.1.....2.d.6	2.b.5	-----	2.a.9	الاسبوع العاشر	Fire / arson investigations:
2	d.1.....2.d.6	-----	-----	2.a.10	الاسبوع الحادي عشر	Explosives and Explosions:
2	d.1.....2.d.6	2.b.5	2.c.4,2.c. 5	2.a.11	الاسبوع الثاني عشر	Firearm and tool marks.
2	d.1.....2.d.6	-----	2.c.4, 2.c.5	2.a.12	الاسبوع الثالث عشر	Impression evidence:
2	d.1.....2.d.6	2.b.6	2.c.5	2.a.12	الاسبوع الرابع عشر	Sexual assault evidences.
2	d.1.....2.d.6	-----	-----	2.a.13	الاسبوع الخامس عشر	Entomo- toxicology:

Course coordinator:

Head of Department: Prof.

Date:

September

2020



Benha University

Faculty of Medicine

Department of Forensic Medicine and Clinical Toxicology

Course Specifications

Course title: Medical Ethics

Code: FORE & TOXI 703

Academic Year (2020– 2021)

- **Department offering the course:** forensic medicine & clinical toxicology.
- **Major or minor elements of the program:** Major.
- **Academic level:** First part of the program.
- **Date of specification approval:**
 - Department council: date: 8/ 9/2020.
 - Faculty council date: 21/ 9/2020.

A) Basic Information:

- **Allocated marks:** 100 marks.
- **Course duration:** 15 weeks of teaching.
- **Credit hours:** 2 hours.
- **Teaching hours:** 2 hours / week.

Method of teaching	Teaching Hours / week	Total hours
Lectures/ Seminars/ Case based learning/ Directed self-learning	2/ week	30
Total	2/ week	30

B) Professional Information:

1- Overall Aim of the Course:

- To provide scientific knowledge of medical ethics.

- To provide practical and clinical skills necessary for proper dealing with ethical problems.
- To provide the students with professional education and communication skills essential for establishing & maintaining good doctor/ patient relationship, appropriate attitudes with colleagues and para-medicals.
- To introduce of the basic facts of medical ethics for the medical students.
- To provide appropriate ethical and professional education necessary for establishment of good communication with patients and colleagues.

2- Intended Learning Outcomes (ILOs):

2.a. Knowledge and understanding:

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

- 2.a.23. *List* principles of medical ethics.
- 2.a.24. *Discuss* requirements for informed consent.
- 2.a.25. *Enumerate* aspects of medical confidentiality and confidentiality disclosure.
- 2.a.26. *Identify* ethical issues for biochemical research.
- 2.a.27. *Discuss* Doctor/Patient relationship.
- 2.a.28. *Illustrate* medical negligence and malpractice.
- 2.a.29. *Explain* aspects of euthanasia.
- 2.a.30. *Discuss* ethical dilemma.
- 2.a.31. *Construct* medical ethics for teaching new trainer.
- 2.a.32. *Criticize* surgical procedures and organ transplantation.
- 2.a.33. *Evaluate* ethics for gynecology and obstetrics.
- 2.a.34. *Judge* ethics for psychiatry.
- 2.a.35. *Assemble* ethics for ICU and emergency.
- 2.a.36. *Evaluate* ethics for clinical pathology and clinical radiology.

2.c. Intellectual Skills:

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

- 2.c.1. *Interpret* case scenario of principles of medical ethics.
- 2.c.2. *Design* an informed consent
- 2.c.3. *Analyse* Ethical issues for biochemical research
- 2.c.4. *Differentiate* between similar cases of Medical negligence and Malpractice.
- 2.c.5. *Interpret* ethical cases of psychiatry.
- 2.c.6. *Analyse* ethical cases of ICU and emergency.
- 2.c.7. *Evaluate* ethics for clinical pathology and clinical radiology.

2.d. General and transferable Skills:

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

- 2.d.1. *Establish* life-long self-learning required for continuous professional development.
- 2.d.2. *Use* the sources of biomedical information and communication technology to remain current with advances in knowledge and practice.
- 2.d.3. *Retrieve*, manage, and manipulate information by all means, including electronic means.
- 2.d.4. *Present* information clearly in written, electronic and oral forms.
- 2.d.5. *Establish* effective interpersonal relationship to communicate ideas and arguments.

3- Course contents:

Subject	Lectures (hrs)	%	Total (hrs)	% of Total
1- Principles of medical ethics.	3	10	3	10 %
2- Consent.	3	10	3	10 %
3-Medical Confidentiality.	2	6.6	2	6.6%

4- Confidentiality disclosure.	2	6.6	2	6.6%
5-Ethical issues for biochemical research.	3	10	3	10 %
6- Doctor/Patient relationship.	3	10	3	10 %
7-Medical negligence and Malpractice.	3	10	3	10 %
8-Euthanasia.	3	10	3	10 %
9-Ethical dilemma.	1	3.3	1	10 %
10- Medical ethics for teaching new trainer.	1	3.3	1	3.3 %
11- Surgical procedures and organ transplantation.	1	3.3	1	3.3 %
12- Ethics for gynecology and obstetric.	1	3.3	1	3.3 %
13- Ethics for psychiatry	1	3.3	1	3.3 %
14- Ethics for ICU and emergency.	1	3.3	1	3.3 %
15- Ethics for clinical pathology	1	3.3	1	3.3 %
16- Ethics for clinical radiology	1	3.3	1	3.3 %
TOTAL	30	100	30	100%

4- Teaching and learning methods:

METHODS USED:

- 11.Modified lectures.
- 12.Seminars.
- 13.Directed self-learning.
- 14.Case based learning
- 15.Practical/clinical classes.

Method	Evidence	ILOs
Modified lectures	CDs of lectures including (video films, brainstorming, problem solving, etc...)	2.a.1-----2.a.14 2.c.1.----2.c.7 2.d.1.----2.d.5

Case based learning	Case scenarios	2.a.1-----2.a.14 2.c.1.----2.c.7 2.d.1.----2.d.5
Directed self-learning.	Log book	2.a.1-----2.a.14 2.c.1.----2.c.7 2.d.1.----2.d.5
Seminars	Log book	2.a.1-----2.a.14 2.c.1.----2.c.7 2.d.1.----2.d.5

5- Students Assessment methods:

5-A) ATTENDANCE CRITERIA:

7. Lectures/seminars (at least 50% attendance).
8. Practical & clinical (at least 75% attendance).
9. Log book (practical reports & students activity).

5-B) Assessment TOOLS:

Tool	Evidence	Purpose (ILOs)
Written examination: <ul style="list-style-type: none"> • MCQs • Case study • Short essay • True or false with explanation 	Attached module of examination	2.a.1-----2.a.14 2.c.1.----2.c.7 2.d.1.----2.d.5
Oral examination	Viva card system	2.a.1-----2.a.14 2.c.1.----2.c.7 2.d.1.----2.d.5

5-C) TIME SCHEDULE:

Exam	Week
1- Formative Assessments	By the end of 5 th week By the end of 10 th week
2- Final exam	15 TH week

FORMATIVE ASSESSMENT:

- Student knows his marks after the Formative exams.

5-D) Weighting System:

Examination	Marks allocated	% of Total Marks
e- Written	50	50
c- Oral	50	50
Total	100	100

5-E) Examination description :

Examination	Description
<i>End semester:</i>	
g- Written	Short assay, select (MCQs), & case study, true or false with explanations.
h- Oral	Viva cards divided into in two sessions
c- Oral	Two sessions (forensic and toxicology)
3- Assignments & other activities	Round assignments, projects , log book... etc.

6- List of references:

6.1- Basic materials:

- Department books by staff members
- seminars of medical ethics

6.2- Essential books (textbooks):

- Furlong, E. (Ed.). (2018). Health Care Ethics. Jones & Bartlett Learning.

6.3- Recommended books:

- Loewy, E. H. (2013). Textbook of Medical Ethics. Springer Science & Business Media.

6.4- Periodicals, Web sites, etc:

- <http://www.pubmed.com>.
- <http://sciencedirect.com>.

7- Facilities required for teaching and learning:

Facilities used for teaching this course include:

- Faculty lecture hall
- Department lectures halls: two

- Museum hall: SIXTH floor
- Department lab.

مصفوفة المعارف والمهارات المستهدفة من المقرر الدراسي

جامعة/ بنها
الكلينيكية
كلية / الطب البشري قسم/ الطب الشرعي والسموم

Medical ethics	مسمى المقرر
FORE & TOXI 703	كود المقرر

مهارات عامة	مهارات ذهنية	المعارف الرئيسية	أسبوع الدراسة	المحتويات للمقرر
2.d.2	2.b.2	2.a.1	1 st week	1- Principles of medical ethics.
2.d.4	2.b.1	2.a.2	2 nd week	2- Consent.
2.d.1	2.b.4	2.a.3	3 th week	3-Medical Confidentiality.
2.d.1	2.b.4	2.a.3	3 th week	4- Confidentiality disclosure.
2.d.2	---	2.a.4	4 th week	5-Ethical issues for biochemical research.
2.d.5	2.b.3	2.a.5	5 th week	6- Doctor/Patient relationship.
2.d.2	2.b.4	2.a.6	6 th week	7-Medical negligence and Malpractice.

2.d.1	2.b.4	2.a.7	7 th week	8-Euthanasia.
2.d.1	---	2.a.8	8 th week	9-Ethical dilemma.
2.d.5		2.a.9	9 th week	10- Medical ethics for teaching new trainer.
2.d.4		2.a.10	10 th week	11- Surgical procedures and organ transplantation.
2.d.5	2.b.5	2.a.11	11 th week	12- Ethics for gynecology and obstetrics.
2.d.1	2.b.6	2.a.12	12 th week	13- Ethics for psychiatry
2.d.2	2.b.7	2.a.13	13 th week	14- Ethics for ICU and emergency.
2.d.4	2.b.8	2. a.14	14 th week	15- Ethics for clinical pathology
2.d.1	2.b.8	2.a.14	15 th week	16- Ethics for clinical radiology

Course coordinator:

Head of Department: Prof. Shereen Elkholy

Date:

September

2020



Benha University

Faculty of Medicine

Department of Forensic Medicine and Clinical Toxicology

Course Specifications

Course title: الباثولوجى (فيما يخص الطب
(...الشرعى)

Code: ...FORE & TOXI 704.....

Academic Year (2021- 2022)

Department offering the course: Forensic Medicine and Clinical Toxicology.

• Major or minor elements of the program:

.....minor.....

• Academic level: First part or second part of the programfirst part of
doctorate degree.....

• Date of specification approval:

- Department council: date: ٨ / 9 /2021.

- Faculty council date: ٢١ / 9 /2020.

A) Basic Information:

• Allocated marks: 100..... marks.

• Course duration: ...15..... weeks of teaching.

• Credit hours:2..... hours

• Teaching hours:2.5..... hours / week.

Method of teaching	Teaching Hours / week	Total hours
1- Lectures/ Seminars/ Case based learning/ Directed self-learning	1.5/ week	22.5
2- Practical	1/ week	15

Total	2.5/ week	37.5
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B) Professional Information:

1- Overall Aim of the Course:

- To provide scientific **knowledge** of pathological changes caused by different diseases and toxins in different body organs .
- To provide **practical and clinical skills** necessary for proper dealing with pathological changes with medicolegal implications.
- To **familiarize** students with fundamental bases of disease processes.
 - To **provide** the students with knowledge concerning definition, causes, mechanisms of disease development.
 - To **provide** the students with knowledge about alteration of structure "morphological changes", functional changes, and complications of diseases in different body systems.
 - To provide the students with **professional education and communication skills** essential for establishing & maintaining good doctor/ patient relationship, appropriate attitudes with colleagues and para-medicals.

2- Intended Learning Outcomes (ILOs):

2.a. Knowledge and understanding:

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

- 2.a.1. Discuss the main disease categories that may affect the body (general pathology) as well as the basic mechanisms underlying these disorders (etiology, pathogenesis & natural history).**
- 2.a.2 Identify pathological changes caused by radiation**
- 2.a.3 Evaluate wound and burn healing**
- 2.a.4 List pathological changes of sudden death in infant and adult.**
- 2.a.5 Mention the fate & complications of the diseases related to medicolegal cases and outline the general management procedures.**
- 2.a.6. Describe the morphologic (gross & microscopic) changes occurring because of such disease processes in cardiovascular system.**
- 2.a.7 Describe the morphologic (gross & microscopic) changes occurring because of such disease processes in central nervous system.**
- 2.a.8 Describe the morphologic (gross & microscopic) changes occurring because of such disease processes in respiratory system.**

2.a.9 Describe the morphologic (gross & microscopic) changes occurring because of such disease processes in gastro intestinal system.

2.a.10 state pathological changes caused by drugs causing tubulointerstitial nephritis.

2.a.11 Explain pathological changes in deaths related to pregnancy .

2.a.12 Recognise different types of fracture and its repair .

2.a.13 Illustrate pathological changes caused by therapeutic drugs and drug of abuse.

2.a.14 Evaluate pathological changes of liver caused by drugs and toxins.

2.b. Practical Skills

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

2.b.1 **Diagnose** different forensic and toxicological conditions depending on pathological finding.

2.b.2.. **Write** reports on the different macroscopic and microscopic pathological specimens.

2.b.3 **Utilize** the obtained pathological information to solve forensic and toxicological problems.

2.c. Intellectual Skills:

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

2.c.1.. **Interpret** different autopsy findings on pathological basis.

2.c.2 **Analyze** case scenario of diseases leading to death and their clinical, pathogenesis, morphological, complication aspects

2.c.3 Identify pathological changes in different organs.

2.c.4. Differentiate between toxins according to their pathological effect in different organs .

2.d. General and transferable Skills:

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

2.d.1. **Establish** life-long self-learning required for continuous professional development.

2.d.2. Use the sources of biomedical information and communication technology to remain current with advances in knowledge and practice.

2.d.3. Retrieve, manage, and manipulate information by all means, including electronic means.

2.d.4. Present information clearly in written, electronic and oral forms.

2.d.5. Establish effective interpersonal relationship to communicate ideas and arguments.

3- Course contents _____ :

Subject	Lectures (hrs)	%	Practical (hrs)	%	Total (hrs)	% of Total
1- General pathology:	2	22.6	2	16.8	4	19%
2- Sudden death in infants and adults:	.5	5.5	-	-	.5	2.3%
3- Cardiovascular system	1	11.1	1.5	12.5	2.5	12%
4- Central nervous system::	1	11.1	1.5	12.5	2.5	12%
5- Respiratory system	1	11.1	1.5	12.5	2.5	12%
6- Gastrointestinal system::	.5	5.5	1.5	12.5	2	9.7 %
7- liver	.5	5.5	1	8.3	1.5	7
8- urinary tract	.5	5.5	1	8.3	1.5	7
9- Female genital system	.5	5.5	1	8.3	1.5	7
10- bones	.5	5.5	1	8.3	1.5	7
11- pathological changes caused by different drugs and toxins	1	11.1	-	-	1	5
TOTAL	9	100	12	100	21	100%

4- Teaching and learning methods:

METHODS USED:

16. Modified lectures.
17. Seminars.
18. Directed self-learning.
19. Case based learning
20. Practical/clinical classes.

Method	Evidence	ILOs
Modified lectures	CDs of lectures including (video films, brainstorming, problem solving, etc...)	2.a.1-----2.a.14., 2.c.1.----2.c.4 2.d.1.----2.d.4
Case based learning	Case scenarios	2.a.1-----2.a.14., 2.c.1.----2.c.4 2.d.1.----2.d.4
Directed self-learning.	Log book	2.a.1-----2.a.14., 2.c.1.----2.c.4 2.d.1.----2.d.4
Seminars	Log book	2.a.1-----2.a.14., 2.c.1.----2.c.4 2.d.1.----2.d.4
Practical classes	Toxicological reports, log book.	2.b.1.----2.b.3

5- Students Assessment methods:

5-A) ATTENDANCE CRITERIA:

10. Lectures/seminars (at least 50% attendance).
11. Practical & clinical (at least 75% attendance).
12. Log book (practical reports & students activity).

5-B) Assessment TOOLS:

Tool	Evidence	Purpose (ILOs)
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Written examination: <ul style="list-style-type: none"> • MCQs • Case study • Short essay • True or false with explanation 	Attached module of examination	2.a.1-----2.a.14., 2.c.1.----2.c.4 2.d.1.----2.d.4
Oral examination	Viva card system	2.a.1-----2.a.14., 2.c.1.----2.c.4 2.d.1.----2.d.4
Practical OSCE]	Practical, clinical & Reports	2.b.1.----2.b.3

5-C) TIME SCHEDULE:

Exam	Week
1- Formative Assessments	By the end of 5 th week By the end of 10 th week
2- Final exam	By the end of 15 th week

FORMATIVE ASSESSMENT:

- Student knows his marks after the Formative exams.

5-D) Weighting System:

Examination	Marks allocated	% of Total Marks
f- Written	50	50%
g- Practical	30	30%
c- Oral	20	20%
Total	100	100%

5-E) Examination description :

Examination	Description
-------------	-------------

<p>End semester:</p> <p>i- Written</p> <p>j- Practical</p> <p>k- Oral</p> <p>c- Oral</p>	<p>Short assay, select (MCQs), & case study, true or false with explanations.</p> <p>Write reports and comments on specimens</p> <p>Viva cards divided into in two sessions</p> <p>Two sessions (forensic and toxicology)</p>
<p>3- Assignments & other activities</p>	<p>Round assignments, projects , log book... etc.</p>

6- List of references:

6.1- Basic materials:

- Department books by staff members
- Department books by staff members :theoretical,museum and histopathology

6.2- Essential books (textbooks): Robbins basic pathology (10th edition) 2017

6.3- Recommended books: Basic pathology of Kumar,Cortan and Robbins

6.4- Periodicals, Web sites, etc:

<http://www.pathmax.com>

- <http://www.pubmed.com>.

- <http://sciencedirect.com>.

7- Facilities required for teaching and learning:

Facilities used for teaching this course include:

- Faculty lecture hall
- Department lectures halls: two
- Museum hall: seventh floor
- Department lab.

مصفوفة المعارف والمهارات المستهدفة من المقرر الدراسي

جامعة/ : كلية / قسم

pathology	مسمى المقرر
FORE & TOXI 704	كود المقرر

المحتويات للمقرر	أسبوع الدراسة	المعارف الرئيسة	مهارات ذهنية	مهارات مهنية	مهارات عامة
1-General pathology:	1-4	2.a.1 2.a.2 2.a.3	2.c.1 2.c.2 2.c.3	-	2.d.1 2.d.2 2.d.3 2.d.4
2-Sudden death in infants and adults:	5	2.a.4	2.c.1 2.c.2 2.c.3	-	2.d.1 2.d.2 2.d.3 2.d.4
3- Cardiovascular system	6,7	2.a.5 2.a.6	2.c.1 2.c.2 2.c.3	2.b.1 2.b.2	2.d.1 2.d.2 2.d.3 2.d.4
4- Central nervous system::	8	2.a.5 2.a.7	2.c.1 2.c.2 2.c.3	2.b.1 2.b.2	2.d.1 2.d.2 2.d.3 2.d.4
5- Respiratory system	9	2.a.5 2.a.8	2.c.1 2.c.2 2.c.3	2.b.1 2.b.2	2.d.1 2.d.2 2.d.3 2.d.4
6- Gastrointestinal system::	10	2.a.5 2.a.9	2.c.1 2.c.2 2.c.3	2.b.1 2.b.2	2.d.1 2.d.2 2.d.3 2.d.4

2.d.1 2.d.2 2.d.3 2.d.4	2.b.1 2.b.2	2.c.1 2.c.2 2.c.3	2.a.5 2.a.14	11	7- liver
2.d.1 2.d.2 2.d.3 2.d.4	2.b.1 2.b.2	2.c.1 2.c.2 2.c.3	2.a.5 2.a.10	12	8- urinary tract
2.d.1 2.d.2 2.d.3 2.d.4	2.b.1 2.b.2	2.c.1 2.c.2 2.c.3	2.a.5 2.a.11	13	9- Female genital system
2.d.1 2.d.2 2.d.3 2.d.4	2.b.1 2.b.2	2.c.1 2.c.2 2.c.3	2.a.5 2.a.12	14	10- bones
2.d.1 2.d.2 2.d.3 2.d.4	2.b.1 2.b.2 2.b.3	2.c.1 2.c.2 2.c.3	2.a.5 2.a.13	15	11- pathological changes caused by different drugs and toxins

Course coordinator:

Head of Department: Prof.

Date:

September

2020



Benha University
Faculty of Medicine
Department of Forensic Medicine and Clinical Toxicology

Course Specifications

Course title: الباطنه العامه
Code: FORE and TOXI 705
Academic Year (2020- 2021)

Department offering the course: internal medicine •

Major or minor elements of the program: minor •

Academic level: First part or second part of the program : first part of MD •

Date of specification approval: •

/ 9 /2020.٨ - Department council: date:

/ 9 /2020.٢١ - Faculty council date:

A) Basic Information:

Allocated marks: 100 marks. •

Course duration: 15 weeks of teaching. •

Credit hours: 2 hours •

Teaching hours: 3 hours / week. •

Method of teaching	Teaching Hours / week	Total hours
1- Lectures/ Seminars/ Case based learning/ Directed self-learning	1h/ week	15
2- Practical / Clinical	2h/ week	30



Total	3h/ week	45
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B) Professional Information:

1- Overall Aim of the Course:

- To provide good scientific knowledge about common medical diseases in studied medical branches (cardiovascular-respiratory-gastrointestinal- etc.....)
- To accept clinical skills how to take history of the patient how to examine different systems of the body with stress on data help in diagnosis.
- To correlate between different studied medical disease and their related toxic and forensic subjects

2- Intended Learning Outcomes (ILOs):

2.a. Knowledge and understanding:

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

- 2.a.1 Explain causes and mechanisms of sudden unexpected deaths, the methods used in their diagnosis and their medicolegal importance.
- 2.a.2 Define different nephrotoxic and hepatotoxic agents.
- 2.a.3 Explain different pathological lesions that could be detected during autopsy.
- 2.a.4 Explain basis scientific knowledge about diagnosis of toxicological cases.
- 2.a.5 Enumerate the principles that govern ethical decision making in clinical practice as well as the medicolegal aspects of medical malpractice.



- 2.a.6 Discuss the pathology of different diseases which help us in decision making in cases of sudden natural deaths.
- 2.a.7 evaluate the signs and symptoms of different toxicological cases and how to differentiate between them and other medical conditions.
- 2.a.8 causes of sudden cardiac arrest and brain death.
- 2.a.9 demonstrate symptom and sign and drug caused heart failure and how to differentiate between them and respiratory system.
- 2.a.10 differentiate between cardiogenic and non cardiogenic pulmonary edema.
- 2.a.11 discuss types of shock.
- 2.a.12 discuss general approach management of toxic coma.
- 2.a.13 compare between metabolic acidosis and respiratory acidosis.
- 2.a.14 demonstrate how to treatment hyponatremia and hypernatremia.
- 2.a.15 interpret causes of hypokalemia
- 2.a.16 describe epileptical fits and drug causing it.
- 2.a.17 demonstrate different between mercury and lead toxicity.
- 2.a.18 assemble causes of intracranial hemorrhage.

.b. Practical Skills

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

- 2.b.1. *Diagnose the toxic coma and differentiate between it and other medical causes of coma.*
- 2.b.2. *Perform physical examination of different systems successfully.*
- 2.b.3. *Take a detailed medical history of patients.*
- 2.b.4. *Establish different investigatory tools that help us in their practical field.*
- 2.b.5. *Perform the different technical skills essential for diagnosis and management of toxicological cases.*
- 2.b.6 *examine patient with cardiovascular diseases and respiratory diseases.*
- 2.b.7 *diagnose true epileptical fits.*

2.c. Intellectual Skills:

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

- 2.c.1. Interpret the clinical and investigational database to be proficient in clinical problem solving.



- 2.c.2. Analyze different technical skills that could help us during diagnosis of different toxicological cases.
- 2.c.3. Select the most appropriate and cost effective diagnostic procedures for each problem.
- 2.c.4. Analyze case scenarios to set an approach to solve clinical problems.
- 2.c.5 analyze and interpret anion gap and osmolar gap.

2.d. General and transferable Skills:

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

- 2.d.1. Manage effectively as a member or a leader of an interdisciplinary team.
- 2.d.2. Maintain the rules & regularities for evaluation of performance of others.
- 2.d.3. Utilize life-long self-learning required for continuous professional development
- 2.d.4. Utilize the sources of biomedical information and communication technology to remain current with advances in knowledge and practice.
- 2.d.5. Retrieve, manage, and manipulate information by all means, including electronic means.
- 2.d.6. Manage Learning plan to others & test their performance.
- 2.d.7. Maintain the principles of statistical methods for collection, presentation & analysis of all types of data.

:: _____ 3 Course contents

Subject	Lectures (hrs)	%	Practical (hrs)	%	Total (hrs)	% of Total
CVS: Symptoms & Sign of C.V diseases.	3	20	5	16.6	8	17.7 %



Examinations& Investigations.						
HEART FAILUR-dysrhythmia						
RESPIRATORY SYSTEM:	3					
Symptoms & Sign of Respiratory diseases.						
Examinations & Investigations.		20	5	16.6	8	17.7%
Drug and Toxins induce respiratory failure.						
Pulmonary edema.						
ICU	3					
-SHOCK		20	5	16.6	8	17.7%
-BRAIN DEATH						
-COMA						
RENAL FAILURE:	1	6.6	2	6.6	3	6.7%
Hepatic failure	1	6.6	3	10	4	8.9 %
Electrolyte disturbance	1	6.6	3	10	4	8.9 %
Drugs induced metabolic disease	1	6.6	2	6.6	3	6.7%
CNS	1	6.6	3	10	4	8.9%
Eplipsy						
Hemorrhage						
Heavy metal	1	6.6	2	6.6	3	6.7
TOTAL	15	100	30	100	45	100%

4- Teaching and learning methods:



METHODS USED:

Modified lectures. .٢١
Seminars. .٢٢
Directed self-learning. .٢٣
Case based learning .٢٤
Practical and clinical classes. .٢٥

Method	Evidence	ILOs
Modified lectures	CDs of lectures including (video films, brainstorming, problem solving, etc...)	2.a.1-----2.a.18., 2.c.1.----2.c.6 2.d.1.----2.d.4
Case based learning	Case scenarios	2.a.1-----2.a.7., 2.c.1.----2.c.5 2.d.1.----2.d.7
Directed self-learning.	Log book	2.a.1-----2.a.18., 2.c.1.----2.c.5 2.d.1.----2.d.7
Seminars	Log book	2.a.1-----2.a.18., 2.c.1.----2.c.5 2.d.1.----2.d.7
Practical and clinical classes	Toxicological reports, log book.	2.b.1.----2.b.7

5- Students Assessment methods:



5-A) ATTENDANCE CRITERIA:

- Lectures/seminars (at least 50% attendance).. ١٣
- Practical & clinical (at least 75% attendance).. ١٤
- Log book (practical reports & students activity).. ١٥

5-B) Assessment TOOLS:

Tool	Evidence	Purpose (ILOs)
Written examination: <ul style="list-style-type: none">• MCQs• Case study• Short essay• True or false with explanation	Attached module of examination	2.a.1-----2.a.18., 2.c.1.----2.c.5 2.d.1.----2.d.7
Oral examination	Viva card system	2.a.1-----2.a.18., 2.c.1.----2.c.5 2.d.1.----2.d.7
Practical & clinical examination [OSPE/OSCE]	Practical, clinical & Reports	2.b.1.----2.b.7

5-C) TIME SCHEDULE:

Exam	Week
1- Formative Assessments	By the end of 5 th week By the end of 10 th week
2- Final exam	By the end of 15 th week

FORMATIVE ASSESSMENT:

- Student knows his marks after the Formative exams.



5-D) Weighting System:

Examination	Marks allocated	% of Total Marks
Written -h	50	50
Practical & Field -i training	20	20
c- Oral	30	30
Total	100	100

5-E) Examination description :

Examination	Description
End semester:	
Written -l	Short assay, select (MCQs), & case study, true or false with explanations.
Practical -m	Write reports and comments on specimens
Oral -n	Viva cards divided into in two sessions
3- Assignments & other activities	Round assignments, projects , log book... etc.

6- List of references:

6.1- Basic materials:

Department books by staff members •

6.2- Essential books (textbooks):



Davidson's Principles and Practice of Medicine, 22st Edition, By Nicki R. College, BSc, FRCP(Ed), Brian R. Walker, BSc, MD, FRCP(Ed), 2018

Kumar and Clark's Clinical Medicine, by Kumar & Clark - 9th Edition, 2016.

Harrison's Principles of Internal Medicine. By by Dan Longo (Author), Anthony Fauci (Author), Dennis Kasper (Author), Stephen Hauser (Author). 18th edition, 2011.

6.3- Recommended books:

Oxford Textbook of Medicine, by David A. Warrell (Author), Timothy M. Cox (Author), John D. Firth (Author) -Edition: 5th, 2010.

6.4- Periodicals, Web sites, etc:

- <http://www.pubmed.com>.

- <http://sciencedirect.com>.

7- Facilities required for teaching and learning:

Facilities used for teaching this course include:

- Faculty lecture hall
- Department lectures halls: two
- Museum hall: SIXTH floor
- Department lab.

مصنوفة المعارف والمهارات المستهدفة من المقرر الدراسي

كلية / الطب البشري قسم / الطب الشرعي والسموم الاكلينيكيه

جامعة/ بنها

الباطنة العامه	مسمى المقرر						
٧٠٥	كود المقرر	مهارات عامة	مهارات مهنية	مهارات ذهنية	المعارف الرئيسية	أسبوع الدراسة	المحتويات للمقرر
2.d.1 2.d.2 2.d.3 2.d.4	2.b.2 2.b.3 2.b.4 2.b.6	2.c.1 2.c.2 2.c.3 2.c.4	2.a.3 2.a.6 2.a.7 2.a.8 2.a.9			Cvs system	
2.d.1 2.d.2 2.d.3 2.d.4	2.b.2 2.b.3 2.b.4 2.b.6	2.c.1 2.c.2 2.c.3	2.a.7 2.a.9 2.a.10			Respiratory system	
2.d.1 2.d.2 2.d.3 2.d.4	2.b.1	2.c.2	2.a.1 2.a.8 2.a.11 2.a.12			ICU	
2.d.1 2.d.2 2.d.3 2.d.4	2.b.2 2.b.3 2.b.4	2.c.2	2.a.2			Renal system	
2.d.1 2.d.2 2.d.3 2.d.4	2.b.2 2.b.3 2.b.4	2.c.2	2.a.2			Hepatic system	
	2.b.5	2.c.3	2.a.14 2.a.15			Electrolyte disturbance	

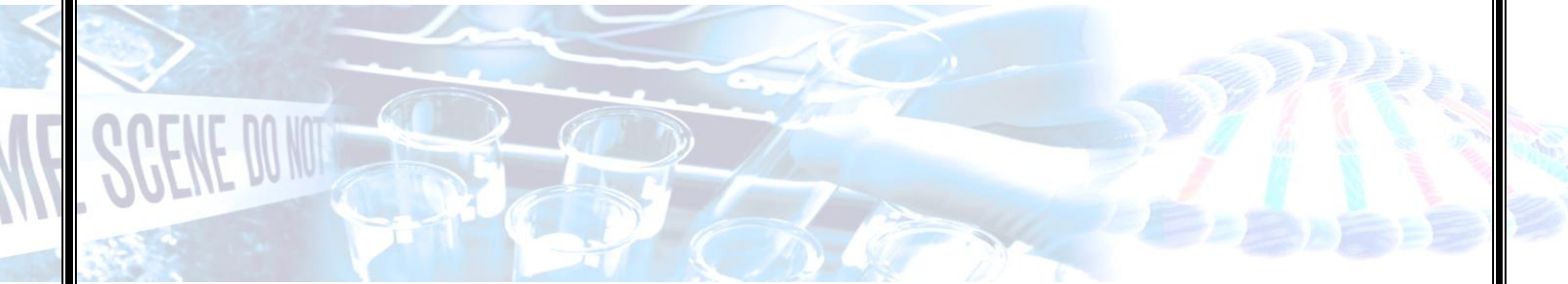


2.d.7	2.b.5	2.c.5	2.a.4 2.a.13	Drugs induced metabolic disease
2.d.5	2.b.2 2.b.7	2.c.2	2.a.1 2.a.3 2.a.16 2.a.18	CNS system
2.d.1 2.d.2 2.d.3 2.d.4		2.c.3	2.a.17	Heavy metals

Course coordinator:

Head of Department: Prof.

Date: September 2020





Benha University

Faculty of Medicine

Department of Forensic Medicine and Clinical Toxicology

Course Specifications

Course title: Medical Statistics
Code: FORE & TOXI 706
Academic Year (2020– 2021)

- Department offering the course: Community Medicine department.
- Major or minor elements of the program: Minor.
- Academic level: First part of the program
- Date of specification approval: department council No. (325)
 - Department council: date: 6 / 9 /2020.
 - Faculty council date: ٢١ / 9 /2020.Revised & approved By Prof. Raneyah Hamdy.

A) Basic Information:

- Allocated marks: 50 marks.
- Course duration: 15 weeks of teaching.
- Credit hours: 1 hour
- Teaching hours: 1 hour / week.

Method of teaching	Teaching Hours / week	Total hours
1-Lectures/ Seminars/ Case based learning/ Directed self-learning	1/ week	15
2- Practical / Clinical	_____	_____
Total	1/week	15

B) Professional Information:

1- Overall Aim of the Course

- 1.1** To equip candidates with Principles of Biostatistics, types of data, methods of presentation of data, types of Epidemiological studies, Sampling, statistical methods & research methods.
- 1.2** To provide the candidates with the knowledge and skills necessary to practice statistical analytical methods and research methods.
- 1.3** To enable the candidates to evaluate the health problems.

2- Intended Learning Outcomes (ILOs):

2.a. Knowledge and understanding:

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

- 2.a.37.** Memorize forensic and clinical toxicology programs based on local needs.
- 2.a.38.** Describe the basics of Principles of Biostatistics, and types of data.
- 2.a.39.** Illustrate Collection of data: Sampling /Screening/ Epidemiological studies
- 2.a.40.** Illustrate Summarization of data: Measures of central tendency/ Measures of dispersion
- 2.a.41.** Demonstrate Presentation of data: Tabular presentation /Graphic presentation/ Mathematical presentation
- 2.a.42.** Define the Normal distribution curve
- 2.a.43.** Identify Hypothesis testing
- 2.a.44.** Describe Analysis of data & tests of significance
- 2.a.45.** Memorize Vital rates
- 2.a.46.** Identify Ethics of research

2.b. Intellectual Skills:

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

- 2.b.1 Choose suitable methods for conducting research .
- 2.b.2 Choose suitable methods for the analysis of data.
- 2.b.3 Select appropriate methods for evaluating the health problem.

2.c. General and Transferable Skills:

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

- 2.c.1 Communicate clearly, sensitively, and effectively with patients and their relatives,
And colleagues from a variety of health and social care professions.
- 2.c.2 Conduct proper counseling practices to provide appropriate basic research methods.
- 2.c.3 Respect the role of others, superiors, colleagues and all members of the
health profession.
- 2.c.4 Conduct different types of surveys.
- 2.c.5 Apply the principles of statistical methods for collection, presentation & analysis of all types of data.

3- Course contents: :

Subject	Lectures (hrs)	% of Total
1-Types of data	1	7%
2-Collection of data: <ul style="list-style-type: none"> ▪ Sampling ▪ Screening 	3	20%

▪ Epidemiological studies		
3-Summarization of data: ▪ Measures of central tendency Measures of dispersion	2	14%
4-Presentation of data: ▪ Tabular presentation ▪ Graphic presentation Mathematical presentation	2	13%
5-Normal distribution curve	1	6%
6-Hypothesis testing	1	6%
7-Analysis of data & tests of significance	2	14%
8-Vital rates	2	14%
9-Ethics of research	1	6%
TOTAL	15	100%

4- Teaching and learning methods:

METHODS USED:

- 26.Modified lectures.
- 27.Seminars.
- 28.Directed self-learning.
- 29.Case based learning
- 30.Practical/clinical classes.

Method	Evidence	ILOs
Modified lectures	CDs of lectures including (video films, brainstorming, problem solving, etc...)	2.a.1-----2.a.10., 2.b.1 ---- 2.b.3 2.c.1.-----2.c.5
Case based learning	Case scenarios	2.a.1-----2.a.10., 2.b.1 ---- 2.b.3 2.c.1.-----2.c.5

Directed self-learning.	Log book	2.a.1-----2.a.10., 2.b.1 ---- 2.b.3 2.c.1.----2.c.5
Seminars	Log book	2.a.1-----2.a.10., 2.b.1 ---- 2.b.3 2.c.1.----2.c.5

5- Students Assessment methods:

5-A) ATTENDANCE CRITERIA:

16. Lectures/seminars (at least 50% attendance).
17. Practical & clinical (at least 75% attendance).
18. Log book (practical reports & students activity).

5-B) Assessment TOOLS:

Tool	Evidence	Purpose (ILOs)
Written examination: <ul style="list-style-type: none"> • MCQs • Case study • Short essay • True or false with explanation 	Attached module of examination To assess knowledge acquisition, including problem solving	2.a.1-----2.a.10., 2.b.1 ---- 2.b.3 2.c.1.----2.c.5
Oral examination	Viva card system To assess understanding and stability of knowledge given, attitude and presentation.	2.a.1-----2.a.10., 2.b.1 ---- 2.b.3 2.c.1.----2.c.5

5-C) TIME SCHEDULE:

Exam	Week
1- Formative Assessments	At 5 th / 7 th weeks

2- Final exam Written exam Oral exam	After 15 weeks of registration of the degree. After the written exam.
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FORMATIVE ASSESSMENT:

- Student knows his marks after the Formative exams.

5-D) Weighting System:

Examination	Marks allocated	% of Total Marks
Written	30	60%
Oral	20	40%
Total	50	100%

5-E) Examination description :

Examination	Description
Written	<ul style="list-style-type: none"> • A two-hour written paper composed of short essay-type questions and Case study.
Oral	<ul style="list-style-type: none"> • One oral examination station with 2 staff members (10-15 minutes: 4-5 questions).

6- List of references:

6.1- Basic materials:

- Handouts of the staff member in the department

6.2- Essential books (textbooks):

- Khalil IF, 1999: Biostatistics, Cairo University

6.3- Recommended books:

- Maxcy RL, 2008: Public health and preventive medicine.

6.4- Periodicals, Web sites, etc:

- WHO.int.com
- Pub. Med
- Google
- Science direct

7- Facilities required for teaching and learning:

Facilities used for teaching this course include:

7.1 Adequate infrastructure: including teaching places (teaching class & teaching hall) provided with comfortable desks, fans, air condition, adequate sources of lighting both natural and artificial and security tools.

7.2 Teaching tools: including screens, black board, white board, data show, computers, laser printer, scanner & copier.

7.3 Computer program: for statistical analysis of data.

Course coordinator: Prof Dr. Abd Elmoniem A. Younis Dawah

Head of Department: Prof Dr Raneyah Hamdy

Date: 6-9 2020

مصنوفة المعارف والمهارات المستهدفة من المقرر الدراسي
كلية / الطب البشرى قسم الطب الشرعى و السموم

جامعة/ بنها

Medical Statistics FORE & TOXI 607	مسمى المقرر كود المقرر	مهارات ذهنية	المعارف الرئيسية	أسبوع الدراسة	المحتويات للمقرر
		مهارات عامة			
		2.c.2	2.a.2	1th	1-Types of data
		2.c.1 2.c.2 2.c.4 2.c.5	2.a.3	2,3,4 th	2-Collection of data: <ul style="list-style-type: none"> ▪ Sampling ▪ Screening ▪ Epidemiological studies
		2.c.2	2.a.4	5,6 th	3-Summarization of data: <ul style="list-style-type: none"> ▪ Measures of central tendency Measures of dispersion

2.c.3 2.c.4		2.a.5	7,8 th	4-Presentation of data: <ul style="list-style-type: none"> ▪ Tabular presentation ▪ Graphic presentation <p style="text-align: right;">Mathematical presentation</p>
2.c.3 2.c.4		2.a.6	9 th	5-Normal distribution curve
2.c.1 2.c.5		2.a.7	10 th	6-Hypothesis testing
2.c.3	2.b.2	2.a.8	11,12 th	7-Analysis of data & tests of significance
2.c.2	2.b.3	2.a.1 2.a.9	13 th	8-Vital rates
2.c.5	2.b.2 2.b.3	2.a.10	14 th	9-Ethics of research

Course coordinator: Prof Dr. Abd Elmoniem A. Younis Dawah

Head of Department: Prof.Dr Raneyah Hamdy

Date: 6 September

2020



Benha University

Faculty of Medicine

Department of Forensic Medicine and Clinical Toxicology

Course Specifications

Course title: Forensic Pathology (Autopsy)
Code: FORE & TOXI 707
Academic Year (2020- 2021)

- **Department offering the course:** Forensic Medicine and Clinical Toxicology.
- **Major or minor elements of the program:** Major
- **Academic level:** Second part of Decorate degree.
- **Date of specification approval:**
 - Department council: date: ٨ / 9 /2020.
 - Faculty council date: ٢١ / 9 /2020.

A) Basic Information:

- **Allocated marks:** 600 marks.
- **Course duration:** 60 weeks of teaching.
- **Credit hours:** 12 hours
- **Teaching hours:** 15 hours / week.

Method of teaching	Teaching Hours / week	Total hours
1- Lectures/ Seminars/ Case based learning/ Directed self-learning	9/ week	540
2- Practical / Clinical	6/ week	360
Total	15/ week	900

B) Professional Information:

1- Overall Aim of the Course:

- To provide the postgraduate student with scientific knowledge of necessary for the practice of forensic pathology.
- To provide the postgraduate student with practical skills that are essential for proper practice of forensic pathology.
- To provide the postgraduate students with basic ethical, professional education essential for proper dealing with common conditions that will be met during practice forensic pathology.

2- Intended Learning Outcomes (ILOs):

2.a. Knowledge and understanding:

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

- 2.a.47. Explain** clinical and medicolegal autopsy.
- 2.a.48. State** general precautions for conduction of medicolegal autopsy.
- 2.a.49. List** objectives of medicolegal autopsy.
- 2.a.50. Discuss** the importance of examining clothing of the case.
- 2.a.51. State** precautions regarding potential infective conditions and other risks and hazards in autopsy room.
- 2.a.52. Describe** procedure for external and internal examination.
- 2.a.53. State** the ancillary investigations including (Selection, preservation and dispatch of viscera/specimens).
- 2.a.54. Define** Exhumation and list its precautions and procedure.
- 2.a.55. Describe** examination of decomposed or putrefied bodies.
- 2.a.56. Discuss** obscure and negative autopsy.
- 2.a.57. Enumerate** autopsy radiology and post-mortem imaging.
- 2.a.58. Discuss** virtual and molecular autopsy.
- 2.a.59. List** artefacts of autopsy.
- 2.a.60. Describe** unknown body identification whether living or dead; ages of medico legal importance in Egypt, methods of

stains identification (blood, seminal and salivary stains), hairs, teeth, and their medico legal importance; illustrate the scientific basis of DNA typing and their medico legal importance

2.b. Practical Skills

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

- 2.b.1. Write** postmortem examination (autopsy) a report.
- 2.b.2. Write** death certificate according to the international form of medical certificate of the cause of death.
- 2.b.3. Identify** dead, living individuals, sex and ages from bones and dentition on specimens or by using imaging.
- 2.b.4. Diagnose** some common studied medicolegal cases and the most probably the leading causes of death.
- 2.b.5. Perform** proper examining clothing of a case.
- 2.b.6. Display** sampling including types of samples, precautions, etc.
- 2.b.7. Perform** procedures for incisions, external and internal examination.
- 2.b.8. Display** artefacts of autopsy.

2.c. Intellectual Skills:

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

- 2.c.1. Compare** between clinical and medicolegal autopsy.
- 2.c.2. Analyze** case scenario of forensic pathology and their medicolegal aspects.
- 2.c.3. Differentiate** between ancillary investigations including samples to be taken, timing, precautions depending upon the nature of the case and the attending circumstances.
- 2.c.4. Interpret** case scenario of medicolegal cases to figure out the most probably the leading causes of death.

2.d. General and transferable Skills:

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

2.d.1. Establish life-long self-learning required for continuous professional development.

2.d.2. Use the sources of biomedical information and communication technology to remain current with advances in knowledge and practice.

2.d.3. Retrieve, manage, and manipulate information by all means, including electronic means.

2.d.4. Present information clearly in written, electronic and oral forms.

2.d.5. Establish effective interpersonal relationship to communicate ideas and arguments.

3- Course contents:

Subject	Lectures (hrs)	%	Practical (hrs)	%	Total (hrs)	% of Total
1-Clinical and medicolegal autopsy. Precautions for medicolegal autopsy. Objectives of medicolegal autopsy	40	7.4	-----	-----	40	4.4
2- Importance of examining clothing.	10	1.8	10	2.7	20	2.2
3- Incisions for the autopsy.	15	2.8	15	4.1	30	3.33
4- Procedure for external and internal examination.	55	10.3	40	11.2	95	10.5
5- Selection, preservation and dispatch of viscera/specimens.	55	10.3	40	11.2	95	10.5
6- Exhumation	15	2.8	-----	-----	15	1.6
7- Autopsy of putrefied bodies.	25	4.6	20	5.6	45	5
8- Artefacts	60	11	40	11.2	100	11.11
9- Autopsy radiology	30	5.5	15	4.1	45	5

10- Virtual and molecular autopsy	30	5.5	-----	----	30	3.33
11- Autopsy report	40	7.4	30	8.3	70	7.7
12- Death certification	25	4.6	30	8.3	55	6.1
13- Identification in the living and in the dead.	140	26	120	33.3	260	28.9
TOTAL	540	100	360	100	900	100%

4- Teaching and learning methods:

METHODS USED:

31. Modified lectures.
32. Seminars.
33. Directed self-learning.
34. Case based learning
35. Practical/clinical sessions.

Method	Evidence	ILOs
Modified lectures	CDs of lectures including (video films, brainstorming, problem solving, etc...)	2.a.1-----2.a.14., 2.c.1.----2.c.4 2.d.1.----2.d.5
Case based learning	Case scenarios	2.a.1-----2.a.14., 2.c.1.----2.c.4 2.d.1.----2.d.5
Directed self-learning.	Log book	2.a.1-----2.a.14., 2.c.1.----2.c.4 2.d.1.----2.d.5
Seminars	Log book	2.a.1-----2.a.14., 2.c.1.----2.c.4 2.d.1.----2.d.5
Practical classes	Autopsy reports, death certification, log book.	2.b.1.----2.b.8

5- Students Assessment methods:

5-A) **ATTENDANCE CRITERIA:**

19. Lectures/seminars (at least 50% attendance).
20. Practical & clinical (at least 75% attendance).
21. Log book (practical reports & students activity).

5-B) Assessment TOOLS:

Tool	Evidence	Purpose (ILOs)
Written examination: <ul style="list-style-type: none"> • MCQs • Case study • Short essay • True or false with explanation 	Attached module of examination	2.a.1-----2.a.14., 2.c.1.-----2.c.4 2.d.1.-----2.d.5
Oral examination	Viva card system	2.a.1-----2.a.14., 2.c.1.-----2.c.4 2.d.1.-----2.d.5
Practical & clinical examination [OSPE/OSCE]	Practical, clinical & Reports	2.b.1.-----2.b.8

5-C) TIME SCHEDULE:

Exam	Week
1- Formative Assessments	By the end of 30 th week
2- Final exam	By the end of 60 th week

FORMATIVE ASSESSMENT:

- Student knows his marks after the Formative exams.

5-D) Weighting System:

Examination	Marks allocated	% of Total Marks
j- Written	300	50%
k- practical	75	12.5%

1- clinical	75	12.5%
m- oral	150	25%
Total	600	100%

5-E) Examination description :

Examination	Description
End semester:	
o- Written	Short assay, select (MCQs), & case study, true or false with explanations.
p- Practical	Write reports and comments on specimens
q- Oral	Viva cards divided into in two sessions
c- Oral	Two sessions (forensic and toxicology)
3- Assignments & other activities	Round assignments, projects, log book... etc.

6- List of references:

6.1- Basic materials:

- Department books by staff members.

6.2- Essential books (textbooks):

- 1- Forensic pathology: Bernard Knight 4th edition (2015).
- 2- Forensic pathology: Daimio 3rd edition (2021).
- 3- Simpson's Forensic Medicine, 14th edition (2019)

6.3- Periodicals, Web sites, etc:

- <http://www.pubmed.com>.
- <http://sciencedirect.com>.
- <http://www.medscape.com>.
- <http://www.master.emedicine.com/maint/cme.asp>.

7- Facilities required for teaching and learning:

Facilities used for teaching this course include:

- Faculty lecture hall
- Department lectures halls: two
- Museum hall: SIXTH floor
- Department lab.

مصنوفة المعارف والمهارات المستهدفة من المقرر الدراسي

جامعة/ : بنها كلية /الطب البشرى قسم الطب الشرعى و السموم الاكلينيكية

Forensic Pathology (Autopsy)	مسمى المقرر
FORE & TOXI 707	كود المقرر

المحتويات للمقرر	أسبوع الدراسة	المعارف الرئيسة	مهارات ذهنية	مهارات مهنية	مهارات عامة
Clinical and medicolegal autopsy. Precautions for medicolegal autopsy. Objectives of medicolegal autopsy	1-2	2.a.1-2.a.2- 2.a.3.	2.c.1.- --- - 2.c.4.	-----	2.d.1.---- 2.d.5
Importance of examining clothing.	3	2.a.4.	2.c.1.----- 2.c.4.	2.b.5	2.d.1.---- 2.d.5
Incisions for the autopsy.	4-5	2.a.5.	2.c.1.----- 2.c.4.	2.b.7	2.d.1.---- 2.d.5
Procedure for external and internal examination.	6-12	2.a.6.	2.c.1.----- 2.c.4.	2.b.7	2.d.1.---- 2.d.5

2.d.1.----- 2.d.5	2.b.6	2.c.1.----- 2.c.4.	2.a.7.	13- 20	Selection, preservation and dispatch of viscera/specimens.
2.d.1.----- 2.d.5	-----	2.c.1.----- 2.c.4.	2.a.8	21	Exhumation
2.d.1.----- 2.d.5	2.b.3- 2.b.6- 2.b.7	2.c.1.----- 2.c.4.	2.a.9	22- 25	Autopsy of putrefied bodies.
2.d.1.----- 2.d.5	2.b.8	2.c.1.----- 2.c.4.	2.a.10-2.a.13	26- 32	Artefacts and obscure and negative autopsy.
2.d.1.----- 2.d.5	2.b.3	2.c.1.----- 2.c.4.	2.a.11.	32- 35	Autopsy radiology
2.d.1.----- 2.d.5	-----	2.c.1.----- 2.c.4.	2.a.12	36- 37	Virtual and molecular autopsy
2.d.1.----- 2.d.5	2.b.1-2.b.4	2.c.1.----- 2.c.4.	-----	38- 42	Autopsy report
2.d.1.----- 2.d.5	2.b.2-2.b.4	2.c.1.----- 2.c.4.	-----	43- 46	Death certification
2.d.1.----- 2.d.5	2.b.3	2.c.1.----- 2.c.4.	2.a.14.	47- 60	Identification in the living and in the dead

Course coordinator: prof. Abdelmonem G.Madboly

Head of Department: Prof. Sheren El-kholy.

Date: 8 September 2020



Benha University

Faculty of Medicine

Department of Forensic Medicine and Clinical Toxicology

Course Specifications

Course title: General Toxicology.

Code: FORE & Toxi 709

Academic Year (2020– 2021)

- **Department offering the course:** Forensic Medicine and clinical Toxicology
- **Major or minor elements of the program:** Major.
- **Academic level:** Second part of Decorate degree.
- **Date of specification approval:**
 - Department council: date: 8 / 9 /2020.
 - Faculty council date: 21 / 9 /2020.

A) Basic Information:

- **Allocated marks:** 400 marks.
- **Course duration:** 60 weeks of teaching.
- **Credit hours:** 8 hours
- **Teaching hours:** 10 hours / week.

Method of teaching	Teaching Hours / week	Total hours
1- Lectures/ Seminars/ Case based learning/ Directed self-learning	6	360
2- Practical / Clinical	4	240
Total	10	600

B) Professional Information:

1- Overall Aim of the Course:

- To provide scientific **knowledge** necessary for practicing clinical toxicology.
- To provide **practical and clinical skills** necessary for proper dealing with intoxicated patient and to learn competencies necessary for continuous professional development.
- To provide the students with **professional education and communication skills** essential for establishing & maintaining good doctor/ patient relationship, appropriate attitudes with colleagues and para-medicals.

2- Intended Learning Outcomes (ILOs):

2.a. Knowledge and understanding:

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

- 2.a.61. Classify** pharmacokinetic and toxokinetic principles including absorption, metabolism, biotransformation, distribution and elimination.
- 2.a.62. State** the general approach to diagnose a poisoned patient including in coma or other considerable conditions as seizures or hallucinations.
- 2.a.63. Explain** the initial evaluation of the poisoned patient concerning the vital signs, supportive care of airway & ventilation and toxic syndromes as anaphylaxis.
- 2.a.64. State** the general steps of management of intoxicated patient, methods of decontamination and enhanced elimination of toxin and antidotal therapy.
- 2.a.5. Illustrate** the role of diagnostic imaging in management of many toxicological emergencies and list the different imaging modalities that can be used (computed tomography; enteric and intravascular contrast studies; ultrasonography; transesophageal echocardiography; magnetic resonance imaging; etc.....).
- 2.a.6. Appraise** the toxicology laboratory testing in measuring the concentration of xenobiotics and other acutely toxic xenobiotics.

- 2.a.7. State** the diagnostic role of electrocardiographic study in managing poisoned patient.
- 2.a.8. List** techniques used to prevent gastrointestinal absorption and the indication and contraindication of each technique.
- 2.a.9. Explain** the intensive care role in managing a case of poisoning.
- 2.a.10. Describe** mechanisms of cellular injury like oxidation-reduction, Reactive Oxygen Species, Free Radical Formation, and biochemical and metabolic principles as acid base chemistry, neurotransmitters, neuromodulators, withdrawal principles, mechanisms and effects of chemical weapons, biological weapons and radiation.
- 2.a.11. Demonstrate** xenobiotic effect on thermoregulation, fluid, electrolyte and acid-base principles.
- 2.a.12. State** the fundamental principles of medical toxicology as neurological, respiratory, cardiovascular, renal, hematological principles, and other systems.
- 2.a.13. Enumerate** the physiologic changes during pregnancy that affect drug pharmacokinetics, pediatric perspective to the application of generally accepted toxicological principles and pathophysiologic disorders exacerbated by xenobiotics in the elderly.
- 2.a.14. State** the measures for poison prevention, risk management and legal principles, patient safety, drug testing in work place and *list* the adverse drug events, medication errors and post marketing surveillance.

2.b. Practical Skills

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

- 2.b.1. Write** a primary toxicological report.

- 2.b.2. Perform** proper physical examination of the intoxicated patients.
- 2.b.3. perform** proper measures for decontamination and enhanced elimination according to what the case needs.
- 2.b.4. Manage** different toxicological cases, through the followings:
Apply ABC (patent airway, breathing and circulation) for life saving of patients, *perform* gastric lavage and *Insert* Ryle tube.
- 2.b.5. Identify** the different causes of coma and *manage* it.
- 2.b.6. Identify** toxicological laboratory tests including ABG for acid base and metabolic disturbance.
- 2.b.7. Perform** bedside test to detect different toxins or confirm the diagnosis rapidly before lab result.
- 2.b.8. Identify** the diagnostic imaging studies as X-rays, CT, and electrocardiographic studies for toxicological cases.

2.c. Intellectual Skills:

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

- 2.c.1. Interpret** case scenario of clinical toxicology cases to put a proper plan for their management.
- 2.c.2. Differentiate** between similar cases of intoxication to formulate precise and accurate differential diagnosis of intoxicated cases.
- 2.c.3. Provide** a diagnostic approach necessary for proper diagnosis and management of intoxicated cases.
- 2.c.4. Interpret** ECG finding in clinical toxicology practice.
- 2.c.5. Analyze** different lab principles of intoxicated patient and formulate treatment plan.
- 2.c.6. Appraise** tests that can be conveniently performed at the bedside.
- 2.c.7. Establish** a proper technique to prevent GIT absorption in intoxicated patient.

2.c.8. *Evaluate* fluid, electrolyte, and acid–base status in poisoned or overdosed patient.

2.d. General and transferable Skills:

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

2.d.1. *Establish* life-long self-learning required for continuous professional development.

2.d.2. *Use* the sources of biomedical information and communication technology to remain current with advances in knowledge and practice.

2.d.3. *Retrieve*, manage, and manipulate information by all means, including electronic means.

2.d.4. *Present* information clearly in written, electronic and oral forms.

2.d.5. *Establish* effective interpersonal relationship to communicate ideas and arguments.

3- Course contents :

Subject	Lectures (hrs)	%	Practical (hrs)	%	Total (hrs)	% of Total
1- Pharmacokinetic and Toxicokinetic Principles:						
• Absorption.	6					
• Metabolism.	6					
• Biotransformation:	6	10	-----	-----	36	6
• Distribution.	6					
• Interpretation of Plasma Concentrations.	6					
• Elimination.	6					
2-The General Approach To Medical Toxicology:						
➤ Diagnosis of the poisoned patient; including:		8.3	12	5	42	7

<ul style="list-style-type: none"> • Coma of unclear etiology & its management. • Rhabdomyolysis & muscle paralysis. • Seizures. • Sick building syndrome. • 5. Acute delirium & Hallucinations. 	6					
<ul style="list-style-type: none"> ➤ Initial Evaluation of the Poisoned Patient: Vital Signs and Toxic Syndromes including: • Supportive care “airway & ventilation.” • Hypersensitivity Reactions & Anaphylaxis. 	6	2.5	24	10	33	5.5
<ul style="list-style-type: none"> ➤ Principles of Managing the Poisoned or Overdosed Patient. 	6	1.6	24	10	30	5
<ul style="list-style-type: none"> ➤ ECG principles 	12	3.3	24	10	36	6
<ul style="list-style-type: none"> ➤ Diagnostic imaging 	12	3.3	24	10	36	6
<ul style="list-style-type: none"> ➤ Lab principles 	6	1.6	24	10	30	5
<ul style="list-style-type: none"> ➤ Techniques used to prevent GIT absorption 	6	1.6	24	10	30	5
<ul style="list-style-type: none"> ➤ Principles and Techniques Applied to Enhance Elimination. 	12	3.3	24	10	30	5
<ul style="list-style-type: none"> ➤ Use of the Intensive Care Unit. 	3	.83	24	10	27	4.5
3-The Fundamental Principles Of Medical Toxicology: <ul style="list-style-type: none"> ➤ Biochemical Principles “Mechanisms of Cellular Injury” ➤ Neurotransmitters and Neuromodulators. ➤ Withdrawal Principles. 	12	6.66	-----	-----	36	6
<ul style="list-style-type: none"> ➤ Thermoregulatory Principles. ➤ Fluid, Electrolyte, and Acid- 	12					

Base Principles.	24	6.66	24	10	60	
➤ Neurologic Principles	9					
➤ Respiratory Principles.	6					
➤ Cardiovascular Principles.	15	14.16	-----	-----	51	8.5
➤ Hematologic Principles.	15					
➤ Gastrointestinal Principles.	6					
➤ Hepatic Principles.	6					
➤ Renal Principles.	6					
➤ Genitourinary Principles.	6	6.66			24	4
➤ Dermatologic Principles.	3		-----	-----		
➤ Ocular Abnormalities	3					
4- Special population:						
➤ Reproductive& perinatal principles	9		-----	-----		
➤ Pediatric principles	9	10			36	6
➤ Geriatric principles	6		-----			
➤ Postmortem Toxicology.	3		-			
➤ Organ Procurement from Poisoned Patients.						
5- MISCELLANEOUS TOXICOLOGICAL ISSUES:						
➤ Poison Prevention and Education.	3					
➤ Hazmat Incident Response.	6					
➤ Chemical Weapons.	6					
➤ Biological Weapons.	6				60	10
➤ Radiation.	3	13.33				
➤ Adverse Drug Events and Post-marketing Surveillance.	3					
➤ Medications, Errors, and Patient Safety.	3					
➤ Risk Management and Legal Principles.	12				5	
➤ Antiquated Antidotes.	3		12			
➤ Drug Testing in the Workplace.						
TOTAL	360	100	240	100	600	100%

4- Teaching and learning methods:

METHODS USED:

- 36.Modified lectures.
- 37.Seminars.
- 38.Directed self-learning.
- 39.Case based learning
- 40.Practical/clinical classes.

Method	Evidence	ILOs
Modified lectures	CDs of lectures including (video films, brainstorming, problem solving, etc...)	2.a.1-----2.a.14., 2.c.1.----2.c.8 2.d.1.----2.d.5
Case based learning	Case scenarios	2.a.1-----2.a.14., 2.c.1.----2.c.8 2.d.1.----2.d.5
Directed self-learning.	Log book	2.a.1-----2.a.14., 2.c.1.----2.c.8 2.d.1.----2.d.5
Seminars	Log book	2.a.1-----2.a.14., 2.c.1.----2.c.8 2.d.1.----2.d.5
Practical classes	Toxicological reports, log book.	2.b.1.----2.b.8

5- Students Assessment methods:

5-A) ATTENDANCE CRITERIA:

- 22.Lectures/seminars (at least 50% attendance).
- 23.Practical & clinical (at least 75% attendance).
- 24.Log book (practical reports & students activity).

5-B) Assessment TOOLS:

Tool	Evidence	Purpose (ILOs)
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Written examination: <ul style="list-style-type: none"> • MCQs • Case study • Short essay • True or false with explanation 	Attached module of examination	2.a.1-----2.a.14., 2.c.1.----2.c.8 2.d.1.----2.d.5
Oral examination	Viva card system	2.a.1-----2.a.14., 2.c.1.----2.c.8 2.d.1.----2.d.5
Practical & clinical examination [OSPE/OSCE]	Practical, clinical & Reports	2.b.1.----2.b.8

5-C) TIME SCHEDULE:

Exam	Week
1- Formative Assessments	By the end of the 30th week
2- Final exam	By the end of the 60th week

FORMATIVE ASSESSMENT:

- Student knows his marks after the Formative exams.

5-D) Weighting System:

Examination	Marks allocated	% of Total Marks
n- Written	200	50
o- Practical & Field training	50	12.5
p- Oral	100	25
q- Clinical	50	12.5
Total	400	100

5-E) Examination description :

Examination	Description
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<p>End semester:</p> <p>r- Written</p> <p>s- Practical</p> <p>t- Oral</p> <p>c- Oral</p>	<p>Short assay, select (MCQs), & case study, true or false with explanations.</p> <p>Write reports and comments on specimens</p> <p>Viva cards divided into in two sessions</p> <p>Two sessions (forensic and toxicology)</p>
<p>3- Assignments & other activities</p>	<p>Round assignments, projects , log book... etc.</p>

6- List of references:

6.1- Basic materials:

- Goldfrank's Manual of Toxicologic Emergencies: Hoffman, R.S.; Nelson, L.S.; Howland, M.A. et al. (eds.), McGraw-Hill Companies, New York, 9th ed., (2019).

6.2- Essential books (textbooks):

- Poisoning & Drug Overdose. By: **Olson, K.R.** (ed.), Lange medical books/McGraw-Hill, New York, Chicago, Toronto, (2018).

6.3- Recommended books:

- Goldfrank's Toxicologic Emergencies. By: Flomenbaum, N.E.; Goldfrank, L.R.; Hoffman, R.S., et al. (eds.), McGraw-Hill, New York, 8th ed., (2016).
- Clinical Toxicology. By: **Ford, M.D.; Delaney, K.A.; Ling, L.J. et al.** (eds.), W.B. Saunders Co., Philadelphia, 1st ed., (2011).

6.4- Periodicals, Web sites, etc:

- <http://www.medscape.com>.
- <http://www.pubmed.com>.
- <http://www.master.emedicine.com/maint/cme.asp>.
- <http://www.science direct.com>.

7- Facilities required for teaching and learning:

Facilities used for teaching this course include:

- Faculty lecture hall
- Department lectures halls: two
- Museum hall: SIXTH floor
- Department lab.
- poison control unit (PCU).

مصنوفة المعارف والمهارات المستهدفة من المقرر الدراسي

كلية / الطب البشري قسم الطب الشرعي و السموم الاكلينيكية

جامعة/ : بنها

السموم العامة	مسمى المقرر
FORE & TOXI 601	كود المقرر

مهارات عامة	مهارات مهنية	مهارات ذهنية	المعارف الرئيسية	أسبوع الدراسة	المحتويات للمقرر
2.d.1.---- 2.d.5.	---	2.c.1.-2.c.2.- 2.c.3.	2.a.1	1-3	1- Pharmacokinetic and Toxicokinetic Principles
2.d.1.---- 2.d.5.	2.b.2	2.c.1.-2.c.2.- 2.c.3.	2.a.2	4-7	2- The General Approach To Medical Toxicology ➤ Diagnosis of the poisoned patient
2.d.1.---- 2.d.5.	2.b.2- 2.b.4.	2.c.1.-2.c.2.- 2.c.3.	2.a.3	8-10	➤ Initial Evaluation of the Poisoned Patient: Vital Signs and Toxic Syndromes
2.d.1.---- 2.d.5.	2.b.1.- 2.b.2- 2.b.3.- 2.b.4.- 2.b.5.	2.c.1.-2.c.2.- 2.c.3.-2.c.5- 2.c.6.-2.c.7.- 2.c.8	2.a.4	10-13	➤ Principles of Managing the Poisoned or Overdosed Patient
2.d.1.---- 2.d.5.	2.b.8.	2.c.1.-2.c.2.- 2.c.3.-2.c.4	2.a.7	14-17	➤ ECG principles
2.d.1.---- 2.d.5.	2.b.8.	2.c.1.-2.c.2.- 2.c.3.	2.a.5	18-21	➤ Diagnostic imaging
2.d.1.---- 2.d.5.	2.b.6- 2.b.7.	2.c.1.-2.c.2.- 2.c.3.-2.b.6.- 2.c.8	2.a.6	22-25	➤ Lab principles
2.d.1.---- 2.d.5.	2.b.3.- 2.b.4.	2.c.1.-2.c.2.- 2.c.3.	2.a.8.	26-28	➤ Techniques used to prevent GIT absorption
2.d.1.---- 2.d.5.	2.b.3.- 2.b.4	2.c.1.-2.c.2.- 2.c.3.	2.a.4.	29-31	➤ Principles and Techniques Applied to Enhance Elimination.

2.d.1.---- 2.d.5.	2.b.5.	2.c.1.-2.c.2.- 2.c.3.-2.c.4.- 2.c.8.	2.a.9	32-35	➤ Use of the Intensive Care Unit.
2.d.1.---- 2.d.5.	----		2.a.10.	36-39	3-The Fundamental Principles Of Medical Toxicology: ➤ Biochemical Principles “Mechanisms of Cellular Injury” ➤ Neurotransmitters and Neuromodulators. ➤ Withdrawal Principles
2.d.1.---- 2.d.5.	2.b.2- 2.b.6.	2.c.1.-2.c.2.- 2.c.3.-2.c.8.	2.a.11	40-44	➤ Thermoregulatory Principles. ➤ Fluid, Electrolyte, and Acid-Base Principles.
2.d.1.---- 2.d.5.	2.b.6- 2.b.7.- 2.b.8.	2.c.1.-2.c.2.- 2.c.3.-2.c.4.	2.a.12	45-48	➤ Neurologic Principles ➤ Respiratory Principles ➤ Cardiovascular Principles. ➤ Hematologic Principles. ➤ Gastrointestinal Principles.
2.d.1.---- 2.d.5.	2.b.2. 2.b.6- 2.b.7.- 2.b.8.	2.c.1.-2.c.2.- 2.c.3.-2.c.8.	2.a.12	49-52	➤ Hepatic Principles. ➤ Renal Principles. ➤ Genitourinary Principles. ➤ Dermatologic Principles. ➤ Ocular Abnormalities
2.d.1.---- 2.d.5.	2.b.2- 2.b.3.- 2.b.4- 2.b.5. 2.b.6- 2.b.7.- 2.b.8.	2.c.1.-2.c.2.- 2.c.3.- 2.c.4.— 2.c.8.-2.c.5.- 2.c.7.	2.a.13	53-55	4- Special population: ➤ Reproductive & perinatal principles ➤ Pediatric principles ➤ Geriatric principles ➤ Postmortem Toxicology. ➤ Organ Procurement from Poisoned Patient.

2.d.1.----- 2.d.5.	-----	2.c.1.	2.a.10 - 2.a.14	56-60	5- MISCELLANEOUS TOXICOLOGICAL ISSUES <ul style="list-style-type: none"> ➤ Poison Prevention and Education. ➤ Hazmat Incident Response. ➤ Chemical Weapons. ➤ Biological Weapons. ➤ Radiation. ➤ Adverse Drug Events and Post-marketing Surveillance. ➤ Medications, Errors, and Patient Safety. ➤ Risk Management and Legal Principles. ➤ Antiquated Antidotes. ➤ Drug Testing in the Workplace.
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Course coordinator: prof. Abdelmonem G.Madboly.

Head of Department: Prof. Sheren El-kholy.

Date: 8 September 2020



Benha University
 Faculty of Medicine
 Department of Forensic Medicine and Clinical Toxicology

Course Specifications

Course title: Clinical toxicology

Code: FORE & TOXI 710

Academic Year (2020– 2021)

- **Department offering the course:** Forensic Medicine & Clinical Toxicology Department
- **Major or minor elements of the program:** *Major*
- **Academic level:** second part of Doctorate
- **Date of specification approval:**
 - Department council: date: 18 / 9 /2020.
 - Faculty council date: 21 / 9 /2020.

A) Basic Information:

- **Allocated marks:** 600 marks.
- **Course duration:** 60 weeks of teaching.
- **Credit hours:** 12 hours
- **Teaching hours:** 15 hours / week.

Method of teaching	Teaching Hours / week	Total hours 1-
Lectures/ Seminars/ Case based learning/ Directed self-learning	9/ week	540
2- Practical / Clinical	6/ week	360
Total	15/ week	900

B) Professional Information:

1- Overall Aim of the Course:

- To provide the students with scientific knowledge that enables them to deal with common medico-legal conditions (either in living or dead cases).



- To provide practical and clinical skills necessary for proper dealing with common medico-legal conditions that will be met during practicing medicine.
- To provide the students with scientific knowledge that enables them to deal with common toxic cases, either acute or chronic poisoning and drug dependence.
- To provide practical and clinical skills necessary for proper dealing with the common toxic cases, that will face him during practicing medicine.
- To provide the students with ethical, professional education and communication skills essential for establishing & maintaining good doctor/patient relationship, appropriate attitudes with colleagues and para-medicals.

2- Intended Learning Outcomes (ILOs):

2.a. Knowledge and understanding:

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

- 2.a.1. *Outline*** the pharmacokinetics, pharmacodynamics, indications, interactions, contraindications, and side effects of various therapeutic modalities (pharmacological and non-pharmacological) for acute, chronic and life-threatening illnesses.
- 2.a.2. *Illustrate*** mechanism, clinical picture and management of therapeutic drugs.
- 2.a.3. *Discuss*** mechanism, clinical picture and management of the studied household poisons especially (corrosives, food poisoning, pesticides, hydrocarbons and other miscellaneous poisons).
- 2.a.4. *Enumerate*** the circumstances of intoxication, management of poisoned patient with environmental toxins (heavy metals, gas poisons, smoke inhalation, etc...).



- 2.a.5. Discuss** mechanism, clinical picture and management of the studied household poisons especially (corrosives, food poisoning, pesticides, hydrocarbons, toxic alcohols and other miscellaneous poisons).
- 2.a.6. Discuss** mechanism, clinical picture and management of the studied Insecticides: Organic Chlorines, Pyrethrin's/Pyrethroids, and DEET, Herbicides, Methyl Bromide and Other Fumigants).
- 2.a.7. List** clinical picture and management of animal toxins (snakes, scorpions, etc....).
- 2.a.8. List** clinical picture of natural toxins as Mushrooms, Plants & Marine Envenomation).
- 2.a.9. Discuss** types of drugs of dependence, mechanism of tolerance, mechanism of actions, clinical picture and management of studied cases of dependence (opioids, cocaine, alcohols, hallucinogens ...).

2.b. Practical Skills

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

- 2.b.1. Write** a primary toxicological report.
- 2.b.2. identify** toxicological specimens (plant specimens, etc....)
- 2.b.3. Diagnose** some common studied intoxicated cases (therapeutics & household intoxicated cases).

2.c. Intellectual Skills:

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

- 2.c.1. Interpret** case scenario of clinical toxicology cases to put a proper plan for their management.
- 2.c.2. Differentiate** between similar cases of intoxication to formulate precise and accurate differential diagnosis of intoxicated cases.



2.c.3 Interpret common investigative and diagnostic tools including: imaging, electrocardiograms, laboratory assays, pathologic studies, and functional assessment tests.

2.c.4 Combine all obtained results either from history taking, medical examination and investigations in order to diagnose the medical problems.

2.c.5 Determine different factors affecting human health, including economic, psychological, social, and cultural factors.

2.c.6 Classify different health risks (demographic, occupational and environmental) that place individuals at risk for injury, endemic and chronic diseases.

2.d. General and transferable Skills:

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

2.d.1. Establish life-long self-learning required for continuous professional development.

2.d.2. Use the sources of biomedical information and communication technology to remain current with advances in knowledge and practice.

2.d.3. Retrieve, manage, and manipulate information by all means, including electronic means.

2.d.4. Present information clearly in written, electronic and oral forms.

2.d.5. Establish effective interpersonal relationship to communicate ideas and arguments.

3- Course contents :

Subject	Lectures (hrs)	%	Practical (hrs)	%	Total (hrs)	% of Total
1- Analgesics and Anti-inflammatory Medications:	30	5.5	24	6.6	54	6 %
2- Foods, Dietary and Nutritional Agents:	45	8.3	24	6.6	69	7.6 %
	144					



3- Pharmaceuticals:	50	9.3	24	6.6	74	8.2 %
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4- Antimicrobials:	30	5.5	24	6.6	54	6 %
5- Cardiopulmonary Medications:	45	8.3	24	6.6	69	7.6 %
6- Psychotropic Medications:	30	5.5	24	6.6	54	6 %
7- Substances of Abuse:	60	11.1	48	13.2	108	12% 8-
Heavy metals	50	9.3	24	6.6	74	8.2% 9-
Household products	45	8.3	24	6.6	69	7.6 % 10-
Pesticides	50	9.3	24	6.6	74	8.2 11-
Natural Toxins and Envenomations:	30	5.5	48	13.2	78	8.7 12-
Occupational and Environmental Toxins:	45	8.3	48	13.2	93	10.3%
TOTAL	540	100	360	100	900	100%

4- Teaching and learning methods:

METHODS USED:

1. Modified lectures.
2. Seminars.
3. Directed self-learning.
4. Case based learning
5. Practical/clinical classes.

Method	Evidence	ILOs
Modified lectures	CDs of lectures including (video films, brainstorming, problem solving, etc...)	2.a.1-----2.a.9., 2.c.1.-----2.c.6 2.d.1.-----2.d.5
Case based learning	Case scenarios	2.a.1-----2.a.9., 2.c.1.-----2.c.6 2.d.1.-----2.d.5
Directed	Log book	2.a.1-----2.a.9.,



self-learning.

2.c.1.----2.c.6
2.d.1.----2.d.5

Seminars Log book

2.a.1.----2.a.9.,



2.c.1.----2.c.6
2.d.1.----2.d.5

Practical classes Toxicological reports, log book.

2.b.1.----2.b.3

5- Students Assessment methods:

5-A) ATTENDANCE CRITERIA:

1. Lectures/seminars (at least 50% attendance).
2. Practical & clinical (at least 75% attendance).
3. Log book (practical reports & students activity).

5-B) Assessment TOOLS:

Tool	Evidence	Purpose (ILOs)
Written examination:	Attached module of examination	2.a.1.----2.a.9., 2.c.1.----2.c.6 2.d.1.----2.d.5
<ul style="list-style-type: none"> • MCCase CQsst udy • Short essay • True or false with explanation 		
Oral examination	Viva card system	2.a.1.----2.a.9., 2.c.1.----2.c.6 2.d.1.----2.d.5
Practical & clinical examination [OSPE/OSCE]	Practical, clinical & Reports	2.b.1.----2.b.3

5-C) TIME SCHEDULE:

Exam	Week
1- Formative Assessments	15 th week / 35 th / 55 th week
2- Final exam	61 th week

➤ **FORMATIVE ASSESSMENT:**

- Student knows his marks after the Formative exams.

5-D) Weighting System:

Examination	Marks allocated	% of Total Marks
a- Written	300	50
b- Practical & Field training	150	25
c- Oral	150	25
Total	600	100

5-E) Examination description :

Examination	Description
End semester:	
a- Written	Short assay, select (MCQs), & case study, true or false with explanations.
b- Practical	Write reports and comments on specimens c-
Oral	Viva cards divided into in two sessions
3- Assignments & other activities	Round assignments, projects , log book... etc.



6- List of references:

6.1- Basic materials:

- 3 Department books by staff members

6.2- Essential books (textbooks):

1. **Goldfrank's Toxicologic Emergencies (2018):** 11th edition, McGraw-Hill, New York, Flomenbaum, N.E.; Goldfrank, L.R.; Hoffman, R.S., et al. (eds.).
2. **Dart's Medical Toxicology (2003):** 3rd Edition. Lippincott Williams and Wilkins, Richard C. Dart, M.D. et al., Eds.
3. **Poisoning & Drug Overdose (2021):** *Olson, K.R.* (ed.) Lange medical books/McGraw-Hill, New York, Chicago, Toronto, 7th ed.

6.3- Recommended books:

- Goldfrank's Toxicologic Emergencies. By: Flomenbaum, N.E.; Goldfrank, L.R.; Hoffman, R.S., et al. (eds.), McGraw-Hill, New York, 11th ed., **(2018)**.

6.4- Periodicals, Web sites, etc:

- <http://www.pubmed.com>.

- <http://sciencedirect.com>.

7- Facilities required for teaching and learning:

Facilities used for teaching this course include:

2. Faculty lecture hall
3. Department lectures halls: two
4. Museum hall: SIXTH floor
5. Department lab.

مصنوفة المعارف والمهارات المستهدفة من المقرر الدراسي

جامعة/ بنها كلية / الطب البشرى قسم: الطب الشرعى والسموم الكلينيكية

مسمى المقرر السموم الكلينيكية الخاصة

كود المقرر FORE & TOXI 710

مهارات عامة	مهارات مهنية	مهارات ذهنية	المعارف الرئيسية	أسبوع الدراسة	المحتويات للمقرر
2.d.1- 2.d.5	2.b.1	2.c.1- 2.c.6	2.a.2	1 st / 2 nd / 3 rd / 4 th / 5 th	Analgesics and Anti-inflammatory Medications:
2.d.1- 2.d.5	2.b.1	2.c.1- 2.c.6	2.a.3	6/7/8/9/10 th	Foods, Dietary and Nutritional Agents:
2.d.1- 2.d.5	2.b.1/ 2.b.3/	2.c.1- 2.c.6	2.a.2	11/12/13/14/15 th	Pharmaceuticals:
2.d.1- 2.d.5	2.b.1	2.c.1- 2.c.6	2.a.2	16-20 th	Antimicrobials:
2.d.1- 2.d.5	2.b.1	2.c.1- 2.c.6	2.a.2	21 th – 25 th	Cardiopulmonary Medications:
2.d.1- 2.d.5	2.b.1/ 2.b.3	2.c.1- 2.c.6	2.a.2	26 th – 30 th	Psychotropic Medications:
2.d.1- 2.d.5	2.b.1/	2.c.1- 2.c.6	2.a.9	31 th – 35 th	Substances of Abuse:
2.d.1- 2.d.5	2.b.1 2.b.3	2.c.1- 2.c.6	2.a.4	36 th – 40 th	Heavy metals
2.d.1- 2.d.5	2.b.1/ 2.b.3	2.c.1- 2.c.6	2.a.3	41 th – 45 th	Household products
2.d.1- 2.d.5	2.b.1/ 2.b.3/	2.c.1- 2.c.6	2.a.6	46 th – 50 th	- Pesticides
2.d.1- 2.d.5	2.b.1/ 2.b.2	2.c.1- 2.c.6	2.a.8	51 th – 55 th	Natural Toxins and Envenomations:
2.d.1- 2.d.5	2.b.1/ 2.b.2	2.c.1- 2.c.6	2.a.4	56 th – 60 th	Occupational and Environmental Toxins:

• **Course coordinator: Prof. Abdelmonaim Goda**

Dr. Yasmina badr

• **Head of Department: Prof. Sherin El- kholy**

• **Date:**

September

2020



Benha University

Faculty of Medicine

Department of Forensic Medicine and Clinical Toxicology

Course Specifications

Course title: الطب الشرعي الاكلينيكي

Code: FORE & TOXI 708

Academic Year (2020- 2021)

- **Department offering the course:** Forensic medicine & clinical toxicology
- **Major or minor elements of the program:** Major.
- **Academic level:** second part of the program
- **Date of specification approval:**
 - Department council: date: ٨ / 9 /2020.
 - Faculty council date: ٢١ / 9 /2020.

A) Basic Information:

- **Allocated marks:** 400 marks.
- **Course duration:** 60 weeks of teaching.
- **Credit hours:** 8 hours
- **Teaching hours:** 9 hours / week.

Method of teaching	Teaching Hours / week	Total hours
1- Lectures/ Seminars/ Case based learning/ Directed self-learning	7/ week	28
2- Practical / Clinical	2/ week	8
Total	9/ week	36

B) Professional Information:

1- Overall Aim of the Course:

- To provide scientific **knowledge** of all aspects of clinical forensic medicine
- To provide **practical and clinical skills** necessary for proper dealing with different situations related to clinical forensic medicine and taking proper decision
- To enable the student to deal with identification of any un known persons.
- To provide the students with **professional education and communication skills** essential for establishing & maintaining good doctor/ patient relationship, appropriate attitudes with colleagues and para-medicals.

2- Intended Learning Outcomes (ILOs):

2.a. Knowledge and understanding:

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

- 2.a.65.** *Classify* different methods of identification in living persons
- 2.a.66.** *Write* medico legal importance of diagnosis of pregnancy & delivery
- 2.a.67.** *List* types of abortion
- 2.a.68.** *Explain* how to diagnose a case of criminal abortion
- 2.a.69.** *List* evidences of virginity & types of hymens
- 2.a.70.** *Identify* physical evidences in rape
- 2.a.71.** *Discuss* physical & sexual child abuse
- 2.a.72.** *List* causes of impotence and sterility in males
- 2.a.73.** *Explain* How to examine a person in an alleged case of Impotence and sterility
- 2.a.74.** *Distinguish* between categories of self-inflicted injuries & criminal offences
- 2.a.75.** *Write* Medico-Legal Aspects of Permanent infirmity
- 2.a.76.** *Define* torture *&State* all injuries suggested in cases of torture.

- 2.a.77. *Discuss* nursing home deaths & methods of elderly abuse
- 2.a.78. *Discuss* Pattern of injuries to the pedestrians, motor cyclists and pedal cyclists.
- 2.a.79. Judge for assessment of impairment to drive due to alcohol or drug
- 2.a.80. *Explain* Role of Psychiatry in crime investigation, punishment and trials.
- 2.a.81. *Discriminate* Civil and criminal responsibilities of an insane person.
- 2.a.82. *Memorise* mental health assessment.
- 2.a.83. List methods of Assisted Reproduction Techniques and Cloning & its implication

2.b. Practical Skills

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

- 2.b.1. *Write* a wound reports
- 2.b.2. *Perform* examination of living victims in cases of sexual assault & child abuse
- 2.b.3. – **perform** examination for self inflicted injuries.
- 2.b.4. – **perform** examination of torture cases

2.c. Intellectual Skills:

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

- 2.c.1. *Analyze* different case scenarios of clinical forensic medicine
- 2.c.2. *Correlate* between different forensic conditions and its related physiological, pharmacological and biochemical basis.
- 2.c.3. *Assess* risks during practicing forensic medicine .
- 2.c.4. *Design* solutions for medical problems met during practicing forensic medicine even with absence of some administrative tools.

2.d. General and transferable Skills:

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

2.d.1. Establish life-long self-learning required for continuous professional development.

2.d.2. Use the sources of biomedical information and communication technology to remain current with advances in knowledge and practice.

2.d.3. Retrieve, manage, and manipulate information by all means, including electronic means.

2.d.4. Present information clearly in written, electronic and oral forms.

2.d.5. Establish effective interpersonal relationship to communicate ideas and arguments.

3- Course contents: _____ :

Subject	Lectures (hrs)	%	Practical (hrs)	%	Total (hrs)	% of Total
1- Identification::	4	20			4	20 %
2. Virginity, Pregnancy and Delivery	2	5	2	30	4	25
3-Abortion	2	5			5	5%
4 - Sexual assault.	3	5	2	30	5	10 %
5- Impotence and Sterility.	1	5	1	20	2	25 %
6- Assisted Reproduction Techniques and Cloning.	1	5			1	1 %
7- Child Abuse	2	10	2		3	2
8- Self Inflicted Injuries::	3	10			1	4
9- Trasportation injuries	2	10	1	20	3	1

10- Nursing home deaths	2	2			2	2
11- Torture and Death in Custody.	2	10			2	2
12-Medico- Legal Aspects of Permanent infirmity	2	3			2	2
13- Forensic Psychiatry	2	10			2	1
Total	28	100	8	100	36	100

4- Teaching and learning methods:

METHODS USED:

41. Modified lectures.
42. Seminars.
43. Directed self-learning.
44. Case based learning
45. Practical/clinical classes.

Method	Evidence	ILOs
Modified lectures	CDs of lectures including (video films, brainstorming, problem solving, etc...)	2.a.1-----2.a.19., 2.c.1.----2.c.4. 2.d.1.----2.d.5
Case based learning	Case scenarios	2.a.1-----2.a.19. 2.c.1.----2.c.4 2.d.1.----2.d.5
Directed self-learning.	Log book	2.a.1-----2.a.19., 2.c.1.----2.c.4 2.d.1.----2.d.5
Seminars	Log book	2.a.1-----2.a.19., 2.c.1.----2.c.4 2.d.1.----2.d.5
Practical classes	Toxicological reports, log book.	2.b.1.----2.b.4

5- Students Assessment methods:

5-A) ATTENDANCE CRITERIA:

25. Lectures/seminars (at least 50% attendance).
26. Practical & clinical (at least 75% attendance).
27. Log book (practical reports & students activity).

5-B) Assessment TOOLS:

Tool	Evidence	Purpose (ILOs)
Written examination: <ul style="list-style-type: none"> • MCQs • Case study • Short essay • True or false with explanation 	Attached module of examination	2.a.1-----2.a.19., 2.c.1.----2.c.4 2.d.1.----2.d.5
Oral examination	Viva card system	2.a.1-----2.a.19., 2.c.1.----2.c.4 2.d.1.----2.d.5
Practical & clinical examination [OSPE/OSCE]	Practical, clinical & Reports	2.b.1.----2.b.4

5-C) TIME SCHEDULE:

Exam	Week
1- Formative Assessments	At 2 nd week & 4 th week
2- Final exam	After the end of 4 th week

FORMATIVE ASSESSMENT:

- Student knows his marks after the Formative exams.

5-D) Weighting System:

Examination	Marks allocated	% of Total Marks
r- Written	200	
s- Practical & Field training	50 150	
c- Oral		
Total	400	

5-E) Examination description :

Examination	Description
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End semester: u- Written v- Practical w- Oral c- Oral	Short assay, select (MCQs), & case study, true or false with explanations. Write reports and comments on specimens Viva cards divided into in two sessions Two sessions (forensic and toxicology)
3- Assignments & other activities	Round assignments, projects , log book... etc.

6- List of references:

6.1- Basic materials:

- Department books by staff members

6.2- Essential books (textbooks):

- Goldfrank's Manual of Toxicologic Emergencies: Hoffman, R.S.; Nelson, L.S.; Howland, M.A. et al. (eds.), McGraw-Hill Companies, New York, 9th ed., (2019).
- Poisoning & Drug Overdose. By: **Olson, K.R.** (ed.), Lange medical books/McGraw-Hill, New York, Chicago, Toronto, (2020).

6.3- Recommended books:

- Goldfrank's Toxicologic Emergencies. By: Flomenbaum, N.E.; Goldfrank, L.R.; Hoffman, R.S., et al. (eds.), McGraw-Hill, New York, 8th ed., (2015).
- Clinical Toxicology. By: **Ford, M.D.; Delaney, K.A.; Ling, L.J. et al.** (eds.), W.B. Saunders Co., Philadelphia, 1st ed., (2015).

6.4- Periodicals, Web sites, etc:

- <http://www.pubmed.com>.
- <http://sciencedirect.com>.

7- Facilities required for teaching and learning:

Facilities used for teaching this course include:

- Faculty lecture hall
- Department lectures halls: two
- Museum hall: SIXTH floor
- Department lab.

مصنوفة المعارف والمهارات المستهدفة من المقرر الدراسي

جامعة/ :بناها..... كلية / .الطب البشري..... قسم.....الطب

الشرعي والسوموم الاكلينيكية.....

الطب الشرعي الاكلينيكي	مسمى المقرر
FORE & TOXI 708	كود المقرر

مهارات	مهارات مهنية	مهارات ذهنية	المعارف الرئيسة	أسبوع الدراسة	المحتويات للمقرر
d.1.			2.a.1.		1- Identification::
		2.c.3	2.a.2. 2.a.3.		2. Virginity, Pregnancy and Delivery
d.3.	2.b.3.	2.c.2.	2.a4. .		3-Abortion
	2.b.2.		2.a5. 2.a.6. .		4 - Sexual assault.
d.4.			2.a.8. 2.a.9.		5- Impotence and Sterility.
		2.c.1.	2.a.19.		6- Assisted Reproduction Techniques and Cloning.

1.5.	2.b.1. 2.b.2.		2.a.7.		7- Child Abuse
	2.b.3.		2.a.10.		8- Self Inflicted Injuries::
		2.c.4.	2.a.14. 2.a.15.		9- Transportation injuries
	2.b.1.		2.a.13.		10- Nursing home deaths
			2.a.11.		11-Medico- Legal Aspects of Permanent infirmity
	2.b.4.		2.a.12.		12 -Torture & deaths in custody
			2.a.16 2.a.17. 2.a.18.		13- Forensic Psychiatry

Course coordinator:

Head of Department: Prof. DR shereen El kholy

Date: September 2022